INTER-INSTITUTIONAL COLLABORATION POLICIES: BUILDING A BLENDED LEARNING NETWORK

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Pennsylvania's public school districts and institutions of higher education share similar challenges with demographic shifts, diminishing public funds, and increased expectations to prepare students with limited resources. Over the past 30 years, Pennsylvania rural school districts have had to learn to do more with less, leaving little in district budgets' for courses beyond the established curriculum. The problem may be that children living in these less densely populated areas have fewer educational opportunities to prepare for college and attend at lesser rates than their peers in more urban and suburban areas. Historically, the lack of funding in small rural school districts have often times left academic leaders and teachers without adequate resources to prepare students for college and/or careers. Policy practices of the past focused on the consolidation of rural schools that were unable to sustain operations, and address pedagogical issues due to the financial limitations of the local tax base. While the technologies of the early 1900s loosely connected rural students to formal education by mail. By the end of the 20th century, advances in broadband technologies enabling rapid and large transfers of data eliminated the obstacles that encumbered earlier forms of distance and online education. Regrettably, financial struggles in these less-densely, populated areas still persist. In

Pennsylvania, one study found that the poorer the district, the more difficult it was for the district to purchase digital content and train teachers and staff to implement blended learning courses (Kolat, 2014). Another study recommended legislators to develop policies that encouraged collaboration between schools, especially for rural districts that cannot afford to start their own online programs (Murin & Watson, 2012). The literature is void of research that examines local level administrative policies to support blended learning within and among institutions in rural locales. The most recent research illustrated how some organizations are perhaps collaborating and moving beyond BL classrooms and forming blended learning networks (BLNs) among and with other institutions (Watson et al., 2014). The aim of this study was to examine the inter-institutional collaboration policies used to build a BLN through a mixed-method case study.

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1.0 INTRODUCTION

Advances in Web 2.0 Internet technologies have created new opportunities for institutions to jointly deliver education programs in rural school districts. Historically, the lack of funding in small rural districts has often left academic leaders and teachers without the resources to adequately prepare students for college and/or careers. Past policy focused on the consolidating rural schools that were unable to sustain operations and to address pedagogical issues due to the financial limitations of the local tax base (Cubberley, 1920). The technologies of the early 1900s loosely connected rural students to formal education by mail. By the end of the twentieth century, however, advances in broadband technologies enabling rapid and large transfers of data eliminated the obstacles that encumbered earlier forms of distance and online education.

Regrettably, despite improvements in technology, financial struggles still persist in these less densely populated school districts. In Pennsylvania, one study found that the poorer the district, the more difficult it was to purchase digital content and train teachers and staff to implement blended learning courses (Kolat, 2014). Another study recommended legislative policies to encourage collaboration between schools, especially for rural districts unable afford to start their own online programs (Murin & Watson, 2012). The literature is void of research that examines local level administrative policies to support blended learning within and among institutions in rural locales. The aim of this study is to examine the inter-institutional collaboration policies that successfully integrate traditional and virtual learning environments

within and across education sectors. A mixed-method case study acted as the primary research methodology because it can best detail the circumstances, policies and processes of the district over an extended period of time (Stake, 1995).

1.1 PURPOSE OF THE STUDY

The primary purpose of this case study (Yin, 2008) is to examine inter-institutional collaboration policies used to create a blended learning network (BLN). In this case, the term BLN referred to sector-wide institutional networks created to link traditional classrooms with online learning within and among organizations. The study examines how academic leaders and instructors in a Pennsylvania rural school district and three higher education institutions collaborated to develop a BLN. Its purpose was to link traditional and online classrooms with the goal of expanding and customizing learning, within and between, public and private educational institutions.

1.2 JUSTIFICATION OF THE STUDY

Research shows how blended learning (BL) courses can provide support for children living in rural areas by expanding educational opportunities beyond the traditional curriculum e.g. advanced placement, dual credit offerings, foreign language, elective courses, and credit recovery among others (Barbour, 2014; Brown, 2012; Murin & Watson, 2012; Picciano & Seaman, 2009; Werth et al., 2013). Researchers have defined, in general, K-12 BL as a formal education program in which a student learns at least in part through online learning in a

supervised brick-and-mortar location (Staker & Horn, 2014). BL courses have increased nationwide among public higher education and K-12 institutions over the last decade (Graham et al., 2013; Picciano & Seaman, 2009; Staker & Horn, 2014; Watson et al., 2014). Researchers have studied the implementation of BL models and courses related to the perceptions, reasons, barriers, and benefits in both public K-12 and higher education, but not across sectors (Brown, 2012; Kolat, 2014; Murin & Watson, 2012; Porter, 2014; Powell, 2014; Vadell, 2013; Varre et al., 2010; Werth et al., 2013).

1.3 CONTEXT OF THE PROBLEM

Research indicates that school-aged populations across Pennsylvania are in decline, creating financial challenges for many of the state's public education institutions (Schackner, 2016; Tucker, 2012). Pennsylvania provides the ideal context because it is one of the largest rural states in the nation with 48 of the state's 67 counties classified as rural (Center for Rural Pennsylvania, 2014). Rural students in the state face unique college access problems in comparison to their peers living in more urban and suburban areas (Howley et al., 2014; NCES, 2012, Pennsylvania Department of Education, 2014). One problem is that school districts in these less-densely populated areas may be limited in their capacity to offer college preparatory, elective or remedial courses to prepare students for post-secondary education or careers due to budget and other constraints (Kolat, 2014; Powell, 2014). This study focuses on the actions taken by academic leaders and instructors in a rural school district to build a BLN. The institutions were provided pseudonym names to protect their identity, and include: three public institutions:

Rocky Road School District, Mountain Top Community College, The Rolling Meadows University and, a private liberal arts college, The Columbia St. Ann College.

1.4 RESEARCH QUESTIONS

More than a decade ago, academic leaders in an economically challenged rural school district decided to offer BL courses to their students. Today, this unionized rural school district offers an associate's degree, AP courses, electives and remedial courses with several institutions of higher education and other vendors. With the demand for BL increasing and little research on inter-institutional collaboration policies, this study provides insight into how rural school districts may create a network to address the lack of resources (Schreuder, 2010; Watson et al., 2014).

The research questions are of importance due to the numerous challenges rural Pennsylvania school districts face in preparing students for post-secondary education and/or careers, especially with limited financial and human resources. The overarching goal of the research questions is to inform principal stakeholders of the inter-institutional collaboration polices potentially needed to create a network. The research questions were constructed to fill possible gaps in the literature related to a BLN. An analysis of archival records and the formation of interview questions provided a framework to collect data to answer the following questions.

1. How did a rural school district and three higher education institutions collaborate both internally and externally to design, implement and evaluate a BLN?
    a. How did institutional policy support, both formal and informal, differ across the three institutions?
    b. Did inter-institutional support policies influence collaboration? And if so, how?

2. To what extent, did collaboration influence the district's capacity to offer blended and online courses?
    a. How did collaboration policies result in expanded learning opportunities for students?
    b. How did collaboration influence student enrollment in the network?

1.5 GLOSSARY OF TERMS

Asynchronous Instruction: Online facilitated instruction that is not limited by location or time (Caner, 2012).

K-12 Blended Learning: A formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience (Staker & Horn, 2014, p.288)

Face-to-face instruction: Formal on-ground teaching and learning process in which the learners and instructors meet together in the same place at the same time (Caner, 2012).

Hybrid Learning: Learning concepts that mix face-to-face instruction with e-learning elements (Caner, 2012).

Networked learning: Formal or informal learning procedure that use the Internet as medium of instruction and supports process of developing and maintaining connections with people and information, with learners supporting one another's learning (Caner, 2012).

Online Learning: Teacher-led education that takes place over the Internet, with the teacher and student separated geographically, using an online instructional delivery system. It may be accessed from multiple settings (e.g. in school and/or out of school buildings) (Watson et al. 2014, p.176).

Online Learning Network: A network of educators involved with computer-based communications—either stand-alone stations or in combination with other media (International Society for Technology in Education, 2015).

Rural school district: Using a density-based model from the Center for Rural Pennsylvania, district with a population density below the statewide average of 284 persons per square mile are defined as rural. When applying this definition, 235 or nearly 47 percent of the Commonwealth's 501 public school districts are considered rural (Center for Rural Pennsylvania, 2014).

STEM: STEM education refers to rigorous instruction in science, technology, engineering and math (Carnegie Science Report, 2014, p.5).

Synchronous Instruction: Online facilitated instruction that is led by a facilitator in real time (Caner, 2012).

Urban school district: Using a density-based model from the Center for Rural Pennsylvania, districts with a population density of equal to, or greater than the statewide average of 284 persons per square mile are identified as urban. Applying this definition, 265 or 53 percent of the state's 500 public school districts are considered urban (Center for Rural Pennsylvania, 2014).

Virtual School: An educational organization that offers K-12 courses through Internet- or Web-based methods (Clark, 2001, p.1).

1.6 RESEARCH DESIGN

Over the past five years, academic leaders and instructors developed a BLN across education sectors, ostensibly, requiring the development of informal and formal inter-institutional collaboration policies. Case study acted as the primary method because of its ability, through multiple methods, to examine the nuances related to policy developments over time. The data needed to address the study's questions influenced the selection of the mixed-methods: archival records and semi-structured interviews. The analysis consisted of three analytical strategies: member checking, open coding and content analysis (described in Chapter 3).

1.7 LIMITATIONS OF THE STUDY

There are several limitations to study including:

1. As a case study, any claims or generalizations generated will be limited to this study (Yin, 2009).
2. Case methods can provide ways to collect initial data to identify successful initiatives. Therefore, the study will limit the investigator's ability to make quantifiable claims of study participants. They can, instead, map the unique contexts for one district's success.
3. With limited qualitative studies in the broad field of K-16 BLN, this study focused on the inter-institutional collaboration policies for the phenomena of this study – BLN – within and between a rural school district and two institutions of higher education.

1.8 ORGANIZATION OF THE STUDY

The chapters of this dissertation are as follows: Chapter 1: includes: purpose of the study, justification of the study, context of the problem, glossary of terms, research design, limitations of the study, and organization of the study. Chapter 2: focuses on a review of the select literature. The purpose of this literature review was to analyze the contested BL literature to support the conceptual framework of this study. The review includes the following areas: history, trends, institutional support, responsibilities of academic leaders and instructors, and inter-organizational relations theory and the need for collaborative service delivery model. Finally, Chapter 3 outlines the conceptual framework in the context of a case study (Yin, 2009). Chapter 4 answers the research questions of the study, while Chapter 5 discusses the major findings of the study.

1.9 CHAPTER SUMMARY

Researchers highlight the advantages of living and attending school in a small rural community; however, those benefits may have eroded over the past 30 years in Pennsylvania as the economic and political landscapes have shifted (Center for Rural Pennsylvania, 2014; Rural Policy Matters, 2011; Schreuder, 2010). Some researchers, parents and business leaders believe children living in these small rural hamlets need a higher level of education to make the same living wages their parents did with only a high school diploma (McDonough et al, 2010; Schreuder, 2010). Unfortunately, rural school districts in Pennsylvania face unprecedented challenges with declining populations and diminishing tax bases to fund local schools. As a result, many of these

smaller rural districts may have limited financial and human resources to adequately prepare students to matriculate from high school to college. The literature also points to the historical split between K-12 and post-secondary institutions in preparing students for life after high school (McDonough et al, 2010). The following chapter illustrates the limited research related to inter-institutional collaborations policies in designing, implementing, and evaluating BLNs. Chapter 2 reviews the literature based on the capacity of online learning to potentially build networks within and across education sectors (Watson et al., 2014).

2.0 LITERATURE REVIEW

The mutual challenges of rural school districts and institutions of higher education in Pennsylvania augmented with the lack of research on the polices related to BLN provided the impetus for the review of literature. A review of the most recent trends uncovered the expansion of BL to form networks within and between secondary and post-secondary institutions (Watson et al., 2014). The aim of this chapter is to review the literature in support of the conceptual framework—Collaborative Service Delivery Model (CSDM), from which the study's theoretical proposition is derived (described in Chapter 3). The study's proposition states:

When implementing a BLN within and across education sectors, collaboration policy may be based on leaderships' sustained institutional support, increasing or decreasing with investments in teacher participation.

It also provided the foundation for the study's research questions.

1. How did a rural school district and three higher education institutions collaborate both internally and externally to design, implement and evaluate a BLN?
    a. How did institutional policy support, both formal and informal, differ across the three institutions?
    b. Did inter-institutional support policies influence collaboration? And if so, how?
2. To what extent, did collaboration influence the district's capacity to offer blended learning courses?

a. How did collaboration policies result in expanded learning opportunities for students?

b. How did collaboration influence student enrollment in the network?

The study also reviewed the literature related to the informal and formal policies needed to create an internal support structure to build a BLN. It included a review of literature in the following areas: professional development, technology, administration, funding, implementation, and evaluation (Falconer & Littlejohn, 2007; Garrison & Kanuka, 2004; Garrison et al., 2013; Harris et al., 2009; Porter et al., 2014). The review also examined the theory of inter-organizational relations as the theoretical basis to develop CSDM as the conceptual framework. The next section examines the literature related to BLN.

2.1 BLENDED LEARNING NETWORK

The term "network" has begun to appear in the titles of secondary educational institutions offering BL programs and courses nationwide (Watson et al., 2014). A review of the select literature reveals that there are no direct empirical studies related to BLNs in rural areas (Kolat, 2014; Powell, 2014; Varre et al., 2010; Watson et al., 2014; Werth et al., 2013). The terms, "blended learning," "online learning," and "networks" appear in the empirical literature and other sources but are defined as separate entities with many definitions. For example, in its simplest form, blended learning combines the pedagogical activities of the traditional classroom with online learning and distance education (Allen et al., 2007; Brown, 2012; Caner, 2012; Garrison & Kanuka, 2004; Horn & Staker, 2014; Osguthorpe & Graham, 2003; Picciano & Seaman, 2009; Saba, 2011;).

Scholars have defined online learning as a “teacher-led initiative taking place over the Internet, with the teacher and student separated geographically, using an online instructional delivery system” (Watson et al. 2014). In the context of internet technology, a network consists of two or more computers that are linked in order to share resources, (Winkelman, 2015).

In the context of BL, the term network appears in the title of numerous institutions describing K-12 public, private and cyber charter schools, as well as the online initiatives of institutions of higher education (Watson et al., 2014).

In my literature search, the term Blended Learning Networks (BLN) only appears in one research article in the context of the field of gerontology. In this study, the researchers describe a BLN as “an innovative model for knowledge transformation involving all key stakeholder groups” (Hanson, Magnusson, & Sennemark, 2011, p. 562). In this study, researchers describe the differences, as well as the importance of face-to-face and online meetings, while highlighting how both networks can be “useful, coexist, and complement each other” (Hanson, et al., 2011, p.569). The same researchers found that BLN can be especially “valuable for smaller municipalities and rural communities with fewer resources” (Hanson et al., 2011, p.569).

In a newspaper article, the term “blended learning network” described an initiative of 13 public school districts in Ohio that collaborated to build a statewide network “to help teachers use technology to increase productivity in the classroom” (Harper, 2014, n. p.). In this context, the purpose of the network is “to provide training and advice to maximize teacher effectiveness” (Harper, 2014, n. p.). In another instance, an initiative of a private Catholic school describes a BLN as an “initiative” of a six-school, five-city network serving 1,500 students in five states. The goal of the BLN is to combine “the most advanced educational software, and on-the-ground expertise to create an instructional environment that provides individualized learning for students

in core academic subjects" (Seton Education Partners, 2014-15). In this context, administrators established similar goals and implemented the same pedagogical strategies across institutions in separate locations. Furthermore, in the context of higher education, the term "networked learning," refers to the "formal or informal learning procedure that uses the Internet as medium of instruction which is a process of developing and maintaining connections with people and information, in which the learners support one another's learning" (Caner, 2012). I searched multiple alternative forms of BLN terms such as "blended education network," "blended educational network," blended learning", "institutional network," and "blended online learning networks," among others. Across all of these searches, only one relevant article was found (Hanson, et al., 2011). The term "blended learning networks" (BLN) will be used for this dissertation. Here it refers to sector-wide institutional networks created to link traditional classrooms with online learning. They are constructed to expand and customize learning, within and between, public and private educational institutions for the benefit of all stakeholders. In the context of higher education, examples include MOOCs (Massive Open Online Courses), Coursera, edX, and FutureLearn, among others. Examples of BLNs in secondary institutions may include statewide virtual schools, cyber charter schools, online learning academies, and providers of digital content. In the end, no matter how BLNs are defined, the success and/or failure of the programs will be determined at the operational level within the appropriate context of learning (Fleck, 2014; Harris et al., 2009) when administrators and instructors collaborate to implement blended learning within and among institutions. The next section examines the barriers related to implementing blended learning within an education institution.

2.2 BLENDED LEARNING: BARRIERS TO IMPLEMENTATION

The purpose of this section is to examine the barriers associated with implementation (Hannum & Irvin, 2009; Kellerer, 2014; Kolat, 2014; Murin & Watson, 2012; Powell, 2014; Powell et al., 2015; Wang, 2009 Werth et al, 2013).

Perceptions of BL varied, and the lack of institutional support may have been the source of negative perceptions of academic leaders and instructors to the challenges stemmed from implementation. Allen and Seaman (2010) documented that only about one-third of responding faculty from 2,500 U.S. higher education institutions expressed positive opinions about online learning (33 percent reported in 2006 and 30 percent reported in 2009). However, Tucker's (2007) survey of online teachers reported that 74 percent of teachers changed their teaching practices both online and in traditional classroom settings after teaching online courses.

The voices of academic leaders and instructors also demonstrated numerous challenges associated with implementation ranging from lack of planning, administrative support, funding, technology, and professional development, among others (Horn et al., 2014; Kolat, 2014; Picciano, 2012). For example, academic leaders in both K-12 and higher education reported that start-up costs associated with implementation in the areas of technology infrastructure, curriculum design, and professional development were common barriers (Hannum et al., 2009; Hobbs, 2004; Kolat, 2014; McLeod, 2014; Wang, 2009). Negative perceptions of online learning courses may have stemmed from the lack of planning in both secondary and post-secondary institutions (Hannum & Irvin, 2009; Kolat, 2014; Wang, 2009; Warren & Peel, 2005). Principals reported that course costs and lack of quality were significant barriers to their schools' ability to offer online classes (McLeod, 2014, p. 293). School district administrators in a nationwide survey indicated that major barriers included concerns about course quality, development costs,

state and local funding policies, and the need for teacher training (Picciano & Seaman, 2009, p.6). When examining the barriers superintendents in three rural counties in Southwestern Pennsylvania faced, Kolat (2014) discovered that course development, course quality and professional development were the most challenging obstacles. However, one significant finding of Kolat's (2014) study of rural school districts found that, in Pennsylvania, the higher a district's market value aid ratio (MVAR), the greater the barrier for school districts to purchase online content for blended courses, as the higher the MVAR, the poorer the district. In rural Colorado, academic leaders and administrators identified broadband access, funding and professional development as "significant" barriers to implementation (Murin & Watson, 2012). In another study, the most common barriers for teachers were the lack of "technology, time, and training (Werth et al. 2013). Moreover, secondary and post-secondary instructors expressed concern over additional workloads brought about by technology and intellectual property (Howley & Howley, 2008; Wang, 2009).

In the end, negative perceptions may have exacerbated the challenges for administrators and instructors because of the lack of policy, planning and resources (Allen & Seaman, 2010; Hannum & Irvin, 2009; Murin & Watson, 2012; Werth et al., 2013). Some researchers suggest to address these perceptions, administrators will need to develop institutional support policies to create a BLN (Werth et al, 2013).

2.3 BLENDED LEARNING NETWORK: INSTITUTIONAL SUPPORT

In 2004, an advocacy group published a policy paper advocating for distance education (DE) as an alternative to the consolidation movement (the closing of financially strapped rural schools)

(Hobbs, 2004). The paper highlighted the potential of DE in expanding and customizing leaning opportunities at little to no cost for these resource-limited public institutions. The same year, another group of researchers published a positioning paper advocating for BL to address the learning efficacy issues of higher education (Garrison & Kanuka, 2004). These researchers argued for a more formal approach to operationalize and support the implementation of BL. They also outlined several issues that they believed needed addressed to implement BL such as policy, planning, resources, scheduling and support (Garrison & Kanuka, 2004). Subsequent studies have suggested the consideration of additional strategies including: professional and curriculum development, stages for implementation, technology infrastructure and evaluation (Falconer & Littlejohn, 2007; Garrison et al., 2013; Harris et al., 2009; Kolat, 2014; Porter et al., 2014; Weiss, 2014). Finally, other studies highlighted the importance of committed and collaborative leadership at all levels of the institution for successful implementation (Garrison & Vaughan, 2012; Murin & Watson, 2012). This study suggests for collaborative efforts to commence pedagogical change requires institutional support. The next section examines the literature to understand the informal and formal policies in the areas related to professional development.

2.3.1 Professional development

Researchers argued that the combination of online technologies, distance education and the traditional classroom creates a new model of education delivery, requiring a different approach to pedagogy (Horn & Staker, 2014; Powell et al., 2015; Werth, et al., 2013). The dichotomy of the classroom changes in BL from a teacher-centered learning method to a student-centered learning environment require a more systematic approach to train teachers (Powell et al., 2015;

Werth et al., 2013). While professional development was identified as a barrier, it was also recognized as a factor for successful implementation (Kellerer et al, 2014; Murin & Watson, 2012; Werth et al., 2013). The main difference between the traditional classroom and BL can be found in the balancing act instructor's encounter when communicating with online and in-class students, as well as providing online instruction with in-class activities (Horn & Staker, 2014; Powell et al., 2015; Werth, et al., 2013). In several cases, professional development allowed instructors to understand best practices and experience the differences of BL compared to the traditional classroom when personalizing instruction for a student-centered, learning environment (Murin & Watson, 2012; Powell et al., 2015; Werth et al., 2013).

Three overall themes emerged from the literature related to professional development in rural areas, including awareness, resources and time (Howley & Howley, 2008; Howley et al., 2011; Murin & Watson, 2012; Werth et al., 2013). Several studies characterized successful PD programs by making teachers aware of the differences between classroom and BL instruction, identifying teachers' needs, and developing multiple, training pathways (Murin & Watson, 2012; Powell et al., 2015; Watson, et al., 2014; Werth, et al., 2013). Another study recommended that resource-limited schools take incremental steps by recognizing internal champions to lead online professional development initiatives (Murin & Watson, 2012). In one rural district, academic leaders hired support staff to facilitate professional development by assisting teachers in gathering and sharing information related to best practices (Powell et al., 2015). Other research illustrated how a number of predominantly rural states (Alaska, Idaho, Indiana, Iowa, Kentucky, Minnesota, Ohio and Tennessee) had developed policies to support BL ranging from state-level offices to resource centers supporting PD initiatives (Watson, et al., 2014). For example, Alaska

established a state office dedicated to e-learning to provide teacher support for professional development in the areas of technology and curricular development (Watson, et al. 2014).

In summary, research related to rural schools highlight a variety of policies and practices related to professional development. However, the research related to PD in rural areas is sparse, especially at the school level. The lack of PD, awareness, resources and time to implement were among the barriers to implementation. Some state policies provided for state-level support, while other states were leaving school districts to fend for themselves (Kolat, 2014; Powell, 2014; Watson, et al., 2014). For example in Pennsylvania, several studies identify the need to train existing staff as a major barrier to implementation suggesting that future studies focus on policies at the district level that support implementation of BL initiatives (Kolat, 2014; Powell, 2014). The question that arises from this review asks: How do resource-limited schools provide professional development opportunities in states that don't support BL at the state level? The next section reviews the literature related to technology.

2.3.2 Technology

Research illustrates the potential and transformational impact of integrating pedagogy and technology in the classroom (Bates & Sangra 2011; Bohle Carbonell, 2013; Bower et al., 2014; Calderon, 2012; Ellis, 2014; Garrison & Kanuka, 2004; Garrison & Vaughn, 2008; Graham et al., 2013; Kearsley, 2013; Laurillard, 2013; McClary, 2013; Moore et al. 2011; Moskal et al., 2013; Ocak, 2011; Palloff & Pratt, 2011; Porter et al., 2014; Roby et al. 2013; Staker & Horn, 2014; VanDerLinden, 2014; Vaughan, 2007; Wallace & Young, 2010/2012; Yi, 2014).

The explosion of technology in the classroom over the last decade has created many voices expressing concern over investment, access and integration (Christensen, 2011; Hobbs,

2004; Howley et al., 2011; Irvin et al., 2009). Policies varied state to state (Watson et al., 2014) however, the lack of policies at the district level may still limit access to technology in some cases, while limiting integration in others (Kellerer, 2014; Kolat, 2014; Picciano, 2009; Powell, 2014; Powell et al., 2015; Murin & Watson, 2012; Vadell, 2013; Werth et al., 2013). Both academic leaders and teachers' voices were represented in the literature and predictable. Academic leaders expressed concern over start-up and operating costs, while teachers expressed reservations about the use of technology in classrooms (Hannum et al., 2009; Hobbs, 2004; Howley et al., 2011; Powell et al., 2015; Werth et al., 2013).

Three main issues expressed by administrators in some cases included internet connectivity or access to broadband, hardware (including servers, computers, and mobile devices), and technology-enhanced classrooms (Murin & Watson, 2012; Picciano, 2009; Werth et al., 2013). Techers expressed concern over the lack of access to technology, training, and time, as well as support from administrators and academic leaders (Murin & Watson, 2012; Werth et al., 2013). In comparison, recent studies in rural Pennsylvania indicate that access to technology may not be the problem, but policies related to technology integration by academic leaders and teachers may be the main obstacle (Kolat, 2014; Powell, 2014; Vadell, 2013). However, the size of the district, especially in rural areas, may limit the district's capacity to deliver digital content (Kolat, 2014; Watson et. al, 2014). These districts may have the technology infrastructure in place but are less likely to develop their own content and use outside providers (Kolat, 2014; Watson et al., 2014). The next section reviews the literature related to administrative support.

2.3.3 Administration

Blended learning adds a new layer of technical complexity at the district and school levels for both academic leaders and instructors, requiring policy development to address administrative support issues (Powell, 2014; Werth et al., 2013). The lack of administrative support has been viewed as an impediment to implementation by researchers, teachers and superintendents (Kellerer, 2014; Kolat, 2014; Powell, 2014; Werth, et al., 2013).

In rural Idaho, the support of the local administration was the key to professional development in order to plan, develop content, and make teachers aware of innovative BL teaching techniques (Werth et al., 2013). In another case in a rural school district in North Carolina, facilitators provided administrative and supervisory duties in support of students and instructors (Varre et al., 2014). Facilitator responsibilities included troubleshooting computer problems, monitoring student homework assignments, proctoring exams, and addressing student scheduling and concerns (Irvin et al., 2009). However, academic leaders also need administrative support to bring about efficiencies in order to address the challenges associated with high start-up costs – for instance, internet access, technology tools (i.e., laptops), professional development for staff, enrollment, rendition, and assessment (Hannum et al. 2009; Kolat, 2014; Powell, 2014; Werth et al., 2013). However, the complexity of BL adds more responsibilities to both instructors and administrators limiting the time to address the issues they face (Howley & Howley, 2008; Murin & Watson, 2012; Werth et al., 2013). The issue that arises for researchers is absence of policy-related discourse in the literature to address administrative support in rural schools for blended learning initiatives (Cavanaugh et al. 2009; Hannum et al. 2009; Irin et al., 2010; Kellerer, 2014; Kolat, 2014; Powell, 2014; Watson, et al., 2011; Watson et al., 2014; Werth et al., 2013). The next section examines funding related to BL environments.

2.3.4 Funding

Administrators and teachers share a common and consistent voice in the literature regarding constraints and challenges brought about by the lack of local and state funding to implement BL (Hannum et al., 2009; Kolat, 2014; Murin & Watson, 2012; Picciano & Seaman, 2007; Powell, 2014; Vadell, 2013; Watson et al., 2011). While twenty-first century technologies have created new educational pathways and, tools and choices for schools and students, local and state funding policies may still create barriers for rural districts with limited local financial resources (Kolat, 2014). Historically, the lack of funding in small rural school districts has often left academic leaders and teachers without the resources to adequately prepare students for college and/or careers. Policy practices of the past focused on the consolidation of rural schools that were unable to sustain operations due to the financial limitations of the local tax base. In Pennsylvania, one study found that the poorer the district, the more difficult it was for the district to purchase digital content and train teachers and staff (Kolat, 2014).

The lack of funding leaves poorer districts with few options to boost the local curriculum. School districts have to purchase, develop, or collaborate to expand educational opportunities for rural youth. In Pennsylvania, state policies, and generational issues may hinder a districts ability to develop BL opportunities (McClure, 2015). For example, Pennsylvania Act 88 requires school districts to subsidize charter schools for students who choose to attend from their district—taking critical resources from already resource, limited schools. Generational issues also threaten to further limit funding for online initiatives in rural school districts as younger population's leave these rural hamlets leaving older populations on fixed incomes to support those left behind (McClure, 2015). Research suggests that the districts most likely to implement BL are the ones losing students to other schools (Murin & Watson, 2012). Recommendations from another study

suggest that legislators develop policies to permit and encourage collaboration between schools, especially for rural districts that cannot afford to start online programs on their own (Murin & Watson, 2012). Regrettably, the literature is void of research that examines local-level policies to support blended learning within and among institutions in rural locales. The next section examines the literature as it relates to implementation.

2.3.5 Implementation

Secondary and post-secondary institutions with the most advanced digital offerings are characterized by the informal and formal policies that sustain the action plans of academic leaders in allocating resources for teaching BL courses institution wide (Garrison & Vaughn, 2013; Watson et. Al., 2014). The advantage of blended learning, unlike strategies of the past, is that it requires a continuous improvement process to align pedagogy and technology through bottom-up innovations and top-down support (Horn & Staker, 2014, p.282). Teachers successful in implementation in several rural districts spoke highly of their training, technology infrastructure and administrative support (Irvin, 2009; Powell et al., 2015; Watson et al., 2014; Werth et al., 2013). Researchers point to the importance of collaborative leadership as an important step when implementing BL within an institution in phases including: buy-in, policy integration, and course delivery (Garrison & Vaughn, 2013).

2.3.5.1 Buy-in

The successful implementation of blended learning requires a supportive environment and begins with administrators identifying and addressing the objectives of all stakeholders within the

context and culture of the organization (Bohle Carbonell, 2013, p.30; Porter et al. 2014, p. 192;). For instance, administrators and faculty need to consider the mission of the institution, stakeholders' needs, resources and the values of the education community to establish the context and build a framework for strategic implementation (Harris et al., 2009; Moskal et al., 2013). Moreover, the elements in any particular blend need to be adapted to the context and expectations of the learning participants involved, (Fleck, 2012, p.404) and must have a sense of its purpose and what goals and outcomes it wants to achieve (Moskal et al., 2013, p.20). An analysis of the data from Porter et al. (2014)'s survey revealed that the main purpose for strategically implementing blended learning was to improve "pedagogy, access and flexibility, and cost effectiveness" requiring administrators to assess, human, financial, and technical resources (Garrison and Kanuka, 2004) while seeking "buy-in" from all involved (Harris et al., pp.158-159). Porter et al.'s (2014) study highlights examples of successful "top-down" and "bottom-up" approaches. For example, central administrators (presidents, provosts etc.) at the University of Missouri St. Louis, Thomas Edison State College, and Fayetteville State University, were the key drivers in advocating blended learning throughout their respective institutions (Porter, et al., 2014, p. 190). Faculty, in contrast, were the early adopters and advocates at Missouri State University and State University of New York (Porter, et al., 2014, p. 190). In contrast, Graham et al.'s (2013) study found that institutions in the "mature and growth stage" of blended learning formed as the result of "grassroots" initiatives led by faculty. In another case, administrators became strategically involved after recognizing the success of the faculty-led initiative to adopt blended-learning practices at the University of Wisconsin—Milwaukee (Graham et al., 2013, p. 9). Subsequently, the provost's office took steps to formally integrate blended learning courses as part of the "institutional operation and culture" (Graham et

al., 2013, p. 9). In the end, blended learning works best when the institution's mission and goals are aligned with and address the needs of students, faculty, and the institution simultaneously (Moskal et al., 2013, p.20), and are supported by well-thought out policies for strategic adoption.

2.3.5.2 Policy integration

By most standards, blended learning is a mechanism that bridges old and new pedagogies together, impacting policy and strategic initiatives in higher education at virtually every level (Moskal et al., 2013, p. 15). In the context of strategically adopting blended learning, it is important to conduct a systematic review of existing policies to determine if modifications and/or new policies are needed to avoid capricious and opportunistic developments, wasted resources, and continued classroom deficiencies (Garrison & Vaughn, 2008, p. 164; Wallace & Young, 2012). The rationale for policy reviews is to provide necessary support for change and should reflect "institutional values, principles, and direction" (Garrison & Vaughn, 2008, p. 165). Successful institutions use policymaking as a framework to modify existing policies or develop new ones and to establish a vision, and guiding principles, particularly in the areas of course approval and equivalency, faculty workload, and resources, intellectual property, and definitions of blended learning (Garrison & Vaughn, 2008; Moskal, 2013, p. 18; Wallace & Young, 2010).

2.3.5.3 Course delivery

"A repeated theme in the discursive literature is that: …the medium itself may be less important than the way in which teaching is approached" (Harris et al, 2009, p. 159 as cited in Ennew and Fernandez-Young, 2006 p. 151). Instructors successful in delivering pedagogy to face-to-face

and online students take into consideration active learning opportunities for both environments, align technology with instruction, and consistently communicate with students the expectations of the course, all of which require the instructor to transform his/her role from lecturer/teacher to "facilitator" (Benson, 2011, p. 145).

While there are numerous formal and informal approaches to teaching both face-to-face and online, the literature highlighting best practices consistently points to effective practices that stress the need for active learning as an integral component of student engagement in a blended learning environment (King & Arnold, 2012, p.45; McGee & Reis, 2012, p.13). For example, successful course delivery provides ample opportunity for interactions from "instructor to student, student to student or student to others, materials and resources" (McGee & Reis, 2012, p. 13). Therefore, faculty must have a "strong command of their subject matter and the ability to design and present activities in an online format" (King & Arnold, 2012, p. 46, as cited in Archambault, 2008).

Technological challenges add an entirely new dynamic to blended learning. Researchers find that student motivation decreases when technology is at odds with instructional outcomes, and recommend that faculty treat technology as a means to a pedagogical end (McGee & Reis, 2012, p.15). Preferably, in blended learning environments, instructors align technology, pedagogy and content to the specific needs of different learners (Mishra & Koehler, 2006). For example, adult students have multiple learning needs, and, when they are unable to meet face-to-face, video recorded lectures posted to the web help to bridge the gap between the instructor and online students (Ausburn, 2004, p.335; King & Arnold, 2012, p.46). The Holden and Westfall (2011) study recommends in the context of a community college, regular mandatory discussion board participation in online courses to provide for student interaction and to help

alleviate/prevent feelings of isolation and distance (Holden & Westfall, 2011, p.40). Instructors are ostensibly limited in their ability to see the nonverbal cues of online learners making effective communication and a well-organized course syllabus an essential element to avoid any unanticipated surprises (Bailey and Card, 2009, p.154).

2.3.6 Evaluation

Advances in technology not only necessitate new business and pedagogical models of education, but change also requires different models of assessment and evaluation to gather the empirical data for academic leaders and instructors to support and manage the delivery of online content (Cavanaugh et al., 2009; Hobbs, 2004; Tucker, 2007; Weiss, 2014).

Evaluation provides a method to assess the efficacy of a program; however, standards must be developed to compare outcomes (Hobbs, 2004). The findings help academic leaders and teachers understand and define what learning technologies and specific pedagogy combined are best and in what context (Hobbs, 2004). However, research related to the evaluation of BL programs in a rural context is limited (Cavanaugh, 2009; Hobbs, 2004; Irvin, 2009; Tucker, 2007; Weiss, 2014). Only one report in the open access literature over the past five years highlights the methods and findings of evaluating how a state attempted to expand educational opportunities to rural youth in North Carolina (Weiss et al., 2014). The North Carolina Virtual Public School is the second largest virtual school in the country next to Florida (Weiss et al., 2014). The state received a Race to the Top Grant to increase the number of STEM courses in rural areas by aligning traditional classroom teachers with online STEM co-teachers in the state's virtual school. One purpose of the summative evaluation was to examine the program's capacity by analyzing enrollment, course and financial data over three semesters (Weiss et al., 2014).

Evaluators conducted a mixed-method approach and included course reviews, classroom observations, student focus groups, student surveys, and teacher interviews. Evaluators found that the lack of course development limited capacity. Only three courses had been developed; however, nearly 400 students enrolled. Unfortunately, financial data was not available to determine cost-effectiveness (Weiss et al., 2014).

2.4 BLENDED LEARNING NETWORK: RESPONSIBILITES

The success of any school hinges on the educators who are in direct contact with the students and the administrators who support them (Cavanaugh et al., 2009, as cited in Darling-Hammond, 2000). For an institution to succeed in blended learning it must have a sense of what goals and outcomes it wants to achieve (Moskal et al., 2013, p. 16). Reports and research show that when implementing blended learning, district superintendents face numerous challenges and obstacles, ranging from outdated policies (e.g., attendance and teacher credentialing), resistance to change, quality of programs, funding, technology and professional development (Horn et al., 2014; LaFrance & Beck, 2014; McLeod & Richardson, 2014; Picciano, 2012). Moreover, in rural districts, the superintendent plays many roles, and has limited time to understand and choose the best option for his or her district (Murin & Watson, 2012). In BL, the superintendent also has the responsibility, not only to raise awareness of different methods, but to collaborate with teachers to find a more suitable pedagogical approach to learning for students (Howley & Howley, 2008).

However, researchers point to academic leaders' sustained institutional support to necessitate change in a BL environment (Horn & Staker, 2014; Howley & Howley, 2008; Powell et al., 2015). Academic leaders, who were unware of the transformational nature of BL were

identified as barriers to implementation (Garrison & Kanuka, 2004; Howley & Howley, 2008; Kolat, 2014). While it is incumbent upon the teacher to understand the difference between BL and the traditional classroom; however, it is the responsibility of academic leaders to raise awareness and collaborate with teachers for change to occur (Howley & Howley, 2008; Kolat, 2014). For example, in one school district, administrators provided teachers with a definition as part of PD, while another district in Ohio required teachers to complete a full-year of professional development prior to teaching a blended course (Watson et al., 2014). Academic leaders and instructors also share joint responsibilities to evaluate the quality of the programs, including both content and technologies. The primary role of the instructor is class preparation and, monitoring student learning to facilitate learning in a BL environment (Kellerer, 2014; Varre et al., 2010) while administrators are needed to help provide funding, facilitate professional development and help solve technology problems. The next section reviews the literature related to Inter-Organizational Relations Theory.

2.5 INTER-ORGANIZATIONAL RELATIONS THEORY

Inter-organizational Relations Theory (IOR) will provide the overall theoretical framework for this study. The overall premise of IOR is to gain a better understanding of the relationships between organizations in pursuit of mutual interests, while remaining autonomous and independent of each other (Cropper et al., 2008). In general, the core features of IOR describe each organization, the relationships and how they are linked (Cropper et al., 2008).

In this case, Pennsylvania's public secondary and post-secondary institutions face similar challenges and share mutual interests in preparing students for life beyond high school. While

the core building blocks of IOR appear to provide a reasonable foundation; there are obvious limitations and strengths of the theory. The fundamental concept that appears absent from the theory is how the internal collaborations of academic leaders and instructors may influence external collaborations with other institutions. In contrast, the strength may be found in how IOR focuses on the management of the social relations occurring between organizations. The IOR literature also describes two basic types of organizational relationships: interactive and non-interactive (Cropper et al., 2008). Interactive relationships refer to the exchange of information or resources, and non-interactive relationships include status, identity, cognitive structures, strategic positioning, and/or core technology (Cropper, et al., 2008, p. 11). For relationships to commence, an exchange of information or resources generally occurs between organizations providing opportunities and constraints for action (Cropper et al. 2008). IOR differs from competing theories like Christensen's Theory of Disruptive Innovation, which is primarily concerned with how technology transforms or sustains organizations (Christensen, 2011). In contrast, IOR is concerned about the social relationships among and between institutions, regardless of the technology. Cropper et al. (2008) highlight several reasons why IOR provides a practical framework to study the implementation of a BLN, which include:

- IOR provides a foundation to understand the social interactions of academic leaders and teachers in the context of implementing a BLN.
- IOR research has developed out of a need to understand organizational relations that have formed because of government funded mandates or investments from the foundation community (Cropper et al., 2008). In this study, it appears as if the school district and higher education institutions collaborated out of necessity and not as the result of a government mandate or influenced by philanthropic funds.

- IOR theory also incorporates a variety of disciplinary and theoretical backgrounds with relationships between public, business, and nonprofits. The organizational relationships in this case are between a public-public and public-private institutions (Cropper et al., 2008).

Moreover, a review of education policy in the IOR literature revealed limited studies (Clegg and McNulty, 2002; Eilers, 2002; Griffiths, 2000; Seddon et al., 2004; Tet et al. 2003). The topics of research ranged from studies on power, politics, gender networks, and partnerships to collaboration between public agencies and schools (Clegg and McNulty, 2002; Eilers, 2002; Griffiths, 2000; Seddon et al., 2004; Tet et al. 2003). However, researchers limited their focus and data collection to the relationships between the organizations. For example, in one case study, researchers evaluated the impact of a government policy at the management level between community organizations, schools and health organizations responsible for delivering health care (Clegg & McNulty, 2002). In this study, researchers examined the social interactions and networks between organizations through the discourse of the actors. However, what they didn't examine was how the internal policies and resources available may have influenced the discourse among the study's participants (Clegg & McNulty, 2002). In another case, Eilers (2002) examined the policy implementation of a collaborative service delivery initiative between three public agencies. The goal was to reduce bureaucratic and service duplication by decentralizing authority. In this study, responsibilities were shifted from the bureaucratic level to the community level. Regrettably, the partnering schools proved to be the weakest link in the collaborative effort due to miscommunication, allocation of resources and lack of support (Eilers, 2002). A central finding of the study discovered that even if capacity to effect change had been established (e.g., training and professional development), those implementing the policy need

support from the top (Eilers, 2002). The study suggests that change may be informed from the bottom up, but implementation is the responsibility of all involved and requires top-down support, especially by those who control staffing and the budget (Eilers, 2002). Both studies, Eilers (2002) and Clegg & McNulty (2002), used a mixed-methods approach to data collection, including document analysis, interviews, focus groups and observations. While one study focused on the evaluation of a policy, (Clegg & McNulty, 2002), the other focused on policy implementation (Eilers, 2002). However, neither focused on the influence of internal policies on external relations. Therefore, this study builds upon these studies to understand if institutional support influences the development of inter-institutional collaboration policies within and between organizations, and, subsequently, teacher participation across education sectors.

In summary, the core concepts of IOR should provide a useful framework to examine inter-institutional collaboration polices; however, the tenets of the theory seem to leave a gap in the literature requiring a finer grain lens. Hence, this study adopts CSDM as described in the methodology chapter of the study (Chapter 3).

3.0 METHODOLGY

This study commenced based on approval of the University of Pittsburgh Institutional Review Board (See Appendix, E, page 146). Chapter 3 provides an overview of the case study design, including: the reasoning for the development of the Collaborative Service Delivery Model (CSDM), research questions, the study's setting, selection and justification of methods, data collection, and analysis protocols.

3.1 COLLABORATIVE SERVICE DELIVERY MODEL

The IOR theory provided a baseline to study inter-institutional collaboration policies in the context of organizations in pursuit of mutual interests, while remaining autonomous and independent of each other (Clark, 1965; Cropper et al., 2008). The concept that appeared absent from the theory is how inter-institutional collaboration policies may influence the internal circumstances and social interactions of stakeholders on external relationships with other organizations (Cropper et al., 2008). Therefore, Collaborative Service Delivery Model (CSDM) provided a finer gain lens and the conceptual framework of this study. CSDM draws from the IOR literature as well as past studies of collaboration in rural areas (Cropper et al., 2008; Furtwengler et al., 1997; Sandfort & Milward, 2008; Vangen & Huxham, 2013; Warren & Peel, 2005). (See Figure 1, page 33).

Researchers argue that teaching and learning experiences change when different pedagogical learning environments are combined (distance education, online learning and traditional classroom), requiring a more collaborative effort between academic leaders and implementing instructors (Bates & Sangra 2011; Bower et al., 2014; Calderon, 2012; Carbonell, 2013; Ellis, 2014; Garrison & Kanuka, 2004; Garrison & Vaughn, 2008; Graham et al., 2013; Horn & Staker, 2015; Kearsley, 2013; Laurillard, 2013; McClary, 2013; Moore et al. 2011; Moskal et al., 2013; Ocak, 2011; Palloff & Pratt, 2011; Porter et al., 2014; Roby et al. 2013; VanDerLinden, 2014; Vaughan, 2007; Wallace & Young, 2010/2012; YI, 2014). There was limited research that demonstrated the influence of leaders sustain institutional support on teacher participation within and across education sectors (Graham et al., 2013).

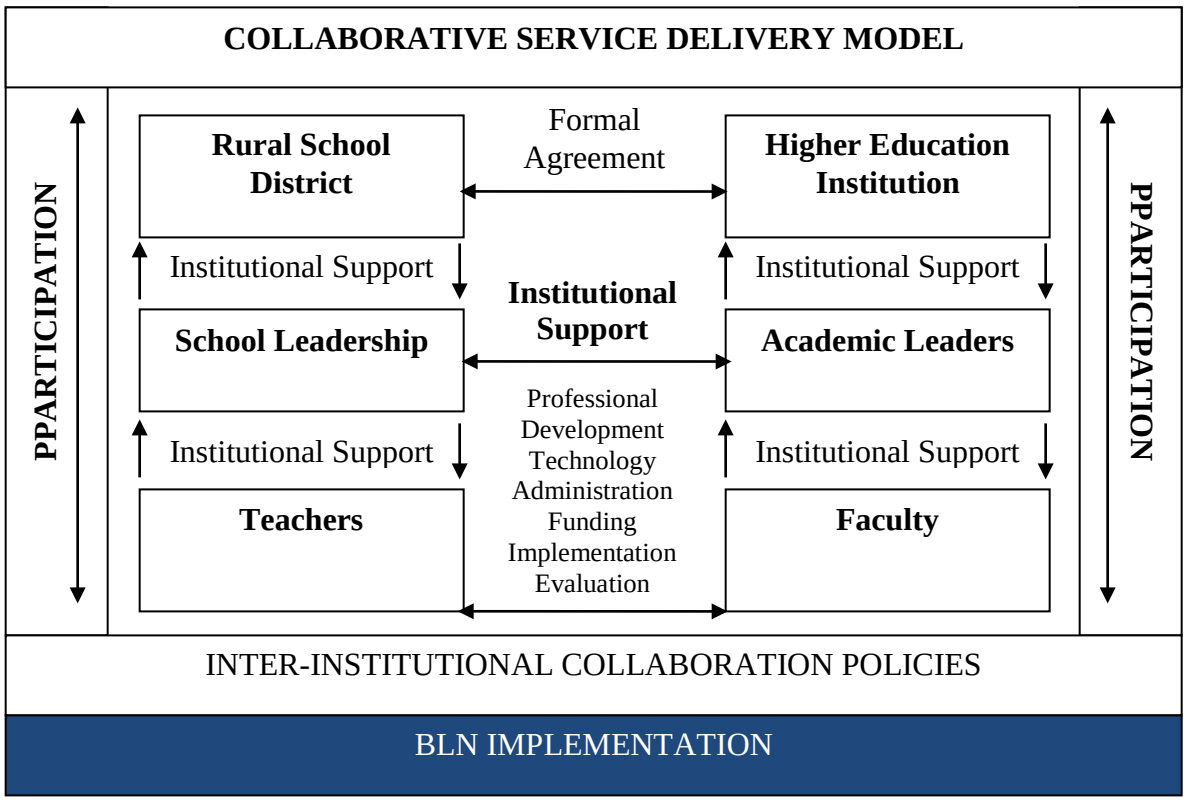

Figure 1: Collaborative Service Delivery Model

Here institutional support is defined by the informal and formal collaboration policies available in the areas of professional development, technology, administration, funding, implementation and evaluation (Bower et al., 2014; Brown, 2012; de la Varre et al., 2014; Faulk, 2011; Garrison & Kanuka, 2004; Garrison & Vaughn, 2008; Graham et al., 2013; Hannum et al., 2009; Hobbs, 2004; Howley et al., 2011; Irvin et al., 2009; Kolat, 2014; McClary, 2013; Moskal et al., 2013; Murin & Watson, 2012; Porter et al., 2014; Powell, 2014; Vadell, 2013; Roby et al. 2013; VanDerLinden, 2014; Wallace & Young, 2010/2012; Watson, et al., 2011; Weldon, 2009; Werth et al., 2013 YI, 2014). For this study, collaboration is characterized by institutional support (Garrison & Kanuka, 2004; Kolat, 2014; Powell, et al., 2015). (See Figure Blank, page 3). Collaboration has also been described by the exchange of information and resources (Cropper et al., 2008). The goal of CSDM is to examine the development of institutional support over time which led to inter-institutional collaboration policies and subsequently, increased teacher participation within and across education sectors. Therefore, CSDM examined institutional support based on the study's theoretical proposition:

> When implementing a BLN within and across education sectors, collaboration policy may be based on leaderships' sustained institutional support, increasing or decreasing with investments in teacher participation.

If true, this study suggests the more institutional support academic leaders provide instructors, the more likely they would participate, resulting in expanded learning opportunities traditionally not available in rural public school districts (Garrison & Vaughan, 2012; Murin & Watson, 2012; Powell et al., 2015). Hence, institutional support provides the basis to examine if informal and formal collaboration policies influence teacher participation in the network through the study's research questions.

3.2 RESTATEMENT OF RESEARCH QUESTIONS

The research questions provided the framework to build the evidence to understand if inter-institutional collaboration policies influenced leaderships' sustained support of teachers in the network. The questions are as follows:

1. How did a rural school district and three higher education institutions collaborate both internally and externally to design, implement and evaluate a BLN?
    a. How did institutional policy support, both formal and informal, differ across the three institutions?
    b. Did inter-institutional support policies influence collaboration? And if so, how?
2. To what extent, did collaboration influence the district's capacity to offer blended and online courses?
    a. How did collaboration policies result in expanded learning opportunities for students?
    b. How did collaboration influence student enrollment in the network?

In summary, this study suggests that for collaboration to occur, policies must be in place for information and other resources to flow within and between organizations (Sandfort & Milward, 2008). Institutional support, therefore, may determine collaboration policies and practices that subsequently influence teacher participation when building the network. The next section describes the participants and geographic setting of the study.

3.3 SETTING

The study takes place in a rural Pennsylvania school district. The state is one of the largest rural states in the nation with nearly 235, or 40 percent, of the state's 500 school districts considered rural (Center for Rural Pennsylvania, 2014). According to U.S. Census data, the district encompasses approximately 151 square miles and serves a population of more than 9,000 residents and 1,500 students. In comparison, the City of Pittsburgh encompasses about 55 square miles, 333,000 residents and 28,000 students (U.S. Census, 2014). The BLN in this case developed over the past decade. This study suggests that the district's success may lie in an institutional support structure that results in polices—ostensibly influencing internal and external relationships, as well as teacher participation. The subsequent section discusses the reasoning behind the selection and justification of case study as the method to examine inter-institutional collaboration policies.

3.4 METHODOLOGY: CASE STUDY

According to Yin (2008), "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p.18). One advantage of quantitative research is how it provides an avenue to measure perceptions related to variables across large populations. In contrast, the strength of a qualitative study is found in how this method draws out the nuances of the case by examining the circumstances and social interactions over time (Stake, 1995). This is

why a case study approach is needed to examine the details related to the implementation of a BLN.

Past studies of BL focused on the implementation of courses but not through an established network and across sectors (Garrison & Vaughan, 2013; Horn & Staker, 2015; Powell et al, 2014). Therefore, it should be reasonable to think that the innovative use of technology and classroom pedagogy between institutions or a BLN constitutes a contemporary phenomenon. One advantage of a case study is how it helps the researcher to focus the study by establishing the logic of the design, data collection, and analysis prior to collecting data (Yin, 2008). According to (Yin, 2008), the goal of case study is to explain the casual relationships in circumstances where it is difficult to measure a phenomena or event that has occurred over time. This was another reason why case study was a better fit for this study than quantitative research—because this method allowed operational links of the program to be traced over an extended period of time by collecting evidence through a variety of sources i.e. documents and interviews (Yin, 2008). The historical nature of this case would appear to fall under this reasoning as academic leaders and instructors in a rural school district decided to offer BL courses to their students more than a decade ago. Since the initial course offerings, the program has evolved over the past six years into a network of courses, programs and degree options with post-secondary institutions and private vendors. Therefore, a mixed-method case study was a reasonable approach to study how inter-institutional collaboration policies may have supported the efforts of academic leaders in increasing teacher participation. The following section described the methods to collect data.

3.5 DATA COLLECTION

This study posits that institutional support becomes an essential component for academic leaders and instructors to collaborate internally as well as externally. Consequently, the initial data should contain information about the informal and formal policies in place to support the BLN initiative. According to the school district's superintendent, the agreements to form the BLN were established within the last five years. The data to address the research questions will be gleaned from the school district's archival records generated from 2010 and 2016 and semi-structured interviews from those involved in the network. The next section outlined the types of documents examined and the reasoning behind the selection process.

3.5.1 Archival records

This section demonstrated the role archival records played in examining how the inter-institutional collaboration policies and the collaborative interactions of this case evolved. These documents took the form of public records and computer files (Yin, 2008). The archival documents provided a historical time frame of how the network developed (Yin, 2008). The weakness of archival documents is found in the potential for limited information, inadequate recording and potential for bias of the individuals reporting the information (Yin, 2008). The archival records in this case provided for a secondary form of data to help support or fill in the gaps of missing information from the interviewees. The archival documents in this case included: agreements between the school district and the community college, school district board meeting minutes, institutional websites, annual reports and government reports. The next section described the importance of semi-structured interviews, as well as the participants interviewed.

3.5.2 Semi-structured interviews

Semi-structured interviews acted as the primary method to collect data. The goal of the interview is to seek out how academic leaders developed institutional support over time within and between institutions. Initial interviews were conducted with the district superintendent and head teacher, overseeing the BLN. Subsequent interviews were based off of the recommendations of the teacher and superintendent through a snowball sampling technique (Babbie, 2013). The advantage of snowball sampling is it can open doors to other individuals related to the case. A disadvantage may occur when recommendations are based on similarities in relationships, and not across networks (Baltar & Brunet, 2012). Interviewees included:

1. Secondary academic leaders and teachers teaching in the network
2. Academic leaders and instructors from post-secondary institutions in the network.

The overall goal of the interview was an attempt to understand participant's actions in the context of the network while confirming the historical nature of the case as well as the current policies (Seidman, 2013). These realities were uncovered through the study's research questions that focused on the phenomena of the case seeking patterns of unanticipated, as well as expected relationships (Stake, 1995). For instance, this study posits that increases in institutional support would have led to increases in collaboration policies and subsequently, teacher participation within and across sectors.

Following the initial interviews, academic leaders and instructors at both institutions were provided transcripts to confirm, and clarify their responses. Additional questions were asked at that time to seek out new information based on the initial responses. Responses were recorded and documented through Express Scribe—a transcription software designed to assist in

transcribing audio files into Microsoft Word documents for analysis. The next section discussed the data analysis methods.

3.6 DATA ANAYLSIS

The study employed three analytical strategies to analyze the data: member checking, open coding, and content analysis (Babbie, 2013; Stake, 1995; Corbin & Strauss, 2008; Krippendorff, 2004). The overall goal of the analysis was to extract data from the interview and institutional documents to answer the research questions of the study. The analysis had three objectives:

1. Determine institutional support policies
2. Compare and contrast support policies among the institutions
3. Determine if support policies led to expanded learning opportunities

Member checking provided interviewees the opportunity to review and revise transcripts to clarify meaning and the intent of their responses (Stake, 1995). Transcripts were emailed to each interviewee for review and asked to return the documents within a week. Interviewees were notified prior, if they did not respond within the allotted time frame, their comments would be considered accurate unless otherwise notified.

Moreover, open coding was used to code the archival and interview data (Corbin & Strauss, 2008). The purpose of open coding was to breakdown data into broad categories for interpretation purposes (Benaquisto, 2008). While the advantage of open coding is a process of breaking down large amounts of data into more specific categories, the downside of this process may strip away the rich context of a larger storyline (Benaquisto, 2008). However, to adjust for this possibility, any larger storyline will be noted in the future research section of the

dissertation. Open coding aligned well with this study because it provided an opportunity not only to identify, but compare and contrast institutional support policies within and across education sectors (Corbin & Strauss, 2008). Additionally, pre-selected codes were created based on institutional support in the areas of professional development, technology, administration, funding, implementation, and evaluation processes. Data was also coded by major themes related to collaboration, internal and external interactions, as well as exchange of information and resources. Finally, the content analysis combined two models from Krippendorff (2004) to create a new model of analysis as a way to compare and contrast support within and among institutions, while building evidence to prove or disprove the study's theoretical proposition.

3.7 METHODS SUMMARY

In summary, Chapter 3 provided an overview of the case study design. This section also highlighted the research questions, as well as, the conceptual framework. Chapter 3 also discussed the selection and justification of methods, study's setting, data collection and analysis protocols. The next chapter, Chapter 4, discusses the purpose of the study and the analysis of the data to answer the research questions.

4.0 PURPOSE OF THE STUDY

Chapter 4 discussed the study's purpose, restates the research questions and features the institutional profiles of the case. It also explains the conceptual framework, data collection methods and analysis applied to answer the research questions.

The study examined the inter-institutional collaboration policies a rural public school district implemented to create a BLN with three higher education institutions (HEIs). In this case, the term BLN refers to sector-wide institutional networks created to link traditional classrooms with online learning. They are constructed to expand and customize learning, within and between, public and private educational institutions for the benefit of all stakeholders. The advantages of a BLN include the potential for rural school districts to overcome financial and geographical barriers through the use of technology by offering courses traditionally not available (Barbour, 2014; Brown, 2012; Hobbs, 2004; Horn & Staker, 2014; Kolat, 2014; Picciano & Seaman, 2009; Saba, 2011; Weldon, 2009). In contrast, the challenges associated with implementation of blended learning include lack of planning, administration, funding, technology and professional development among others (Graham et al., 2013; Horn et al., 2014; Kolat, 2014; Picciano et al., 2012).

4.1 RESTATMENT OF RESEARCH QUESTIONS

The research questions provided the basis to examine the influence of inter-institutional collaboration policies within and across the BLN.

1. How did a rural school district and three higher education institutions collaborate both internally and externally to design, implement and evaluate a BLN?
    a. How did institutional policy support, both formal and informal, differ across the three institutions?
    b. Did inter-institutional support policies influence collaboration? And if so, how?
2. To what extent, did collaboration influence the district's capacity to offer blended and online courses?
    a. How did collaboration policies result in expanded learning opportunities for students?
    b. How did collaboration influence student enrollment in the network?

4.2 INSITUTIONAL PROFILES

This section described the profiles of four education institutions formed to create the BLN. They are located in rural Pennsylvania. Pseudonym names were provided to protect the identities and, include: Rocky Road School District, Mountain Top Community College, Rolling Meadows University and, a private liberal arts college, Columbia St. Ann College. (See Table 1, page 46).

4.2.1 Rocky Road School District

The Rocky Road School District is a public rural school district, which spans more than 250 square miles (district website, 2017). The district is comprised of three elementary schools (grades: K through-6), one junior high school (grades: 7 through-8) and one senior high school (grades: 9 through -12). It serves a population of more than 9,000 residents and 1,500 students (district website, 2017). According to the U.S. Census, the district is predominantly white with 57 percent of the student population considered economically disadvantaged and about 12 percent with special education needs.

4.2.2 Mountain Top Community College

Mountain Top Community College is one of fourteen public community colleges in the state. It consists of a main campus, five centers, and online courses. In the 2015-2016 academic school year, the college had 3,275 credit students and 730 non-credit students; 56 percent were female and nearly 44 percent were male (college annual report, 2016). The majority of students (68.7 percent) were of traditional college age (under 25 years of age) and 31.2 percent were non-traditional (over 25 years of age). The college's website lists 25 associate degree programs, as well as certificate and diploma options. The college offers dual enrollment programs to local school districts allowing students to earn college credits while in high school. Tuition is $5,790 a year for full-time students living in the county. For students living outside the county, tuition is $7,950 a year. The tuition rate for out-of-state students is $11,010 a year (college website, 2017). The college's two-year, graduation rate was 26 percent (college website, 2015).

4.2.3 Rolling Meadows University

The Rolling Meadows University is one of 14 state-owned, public universities. It is also the only four-year, public institution of higher education in the region. In the 2015-2016 academic year, the college enrolled 5,368 students with 65 percent female and 35 percent male (university website, 2016). According to the university's website, 90 percent of the student body is from Pennsylvania with the remaining students from 44 states and 18 countries. Tuition for one academic year not including housing and other fees was $7,238 in 2016 (university website, 2017). The four-year graduation rate is only 31 percent (U.S. News, 2015). The university also offers dual enrollment courses for high school students.

4.2.4 Columbia St. Ann College

The Columbia St. Ann College is a private college located in a small rural town. In 2014, the college enrolled 1,632 students, or 60 percent of whom were residents of Pennsylvania. The remaining students originated from 41 states and 34 countries. According to the institution's website, in 2011 the college's had an endowment of $110 million. The site lists tuition at $51,760 a year, including fees, room and board. The college's four-year graduation rate is 96 percent (college, website, 2016) compared to the national rate of 47 percent (NCES, 2016). The college also partners with local school districts, offering dual enrollment courses.

Table 1: Institutional profiles by tuition, graduation rate and enrollment

Institution	Annual Tuition	Graduation Rate	Enrollment
Rocky Road School District	Unavailable	89% (High school)	1,549
Mountain Top Community College	$5,790	26% (Two-year rate)	3,275
Rolling Meadows University	$7,238	31% (Four-year rate)	5,368
Columbia St. Ann College	$41,390	96% (Four-year rate)	1,632

4.3 COLLABORATIVE SERVICE DELIVERY MODEL

The limited research in Inter-Organizational Relations Theory (IOR) was the impetus to adopt the Collaborative Service Delivery Model (CSDM) as a way to examine the policies academic leaders implemented to support instructors within and among institutions (Clegg & McNulty, 2002; Cropper et al., 2008; Eilers, 2002). More specifically, CSDM provided the structure to examine if sustained institutional support available influenced teacher participation within and among institutions. Institutional support was defined by the policies academic leaders had implemented to support teachers, teaching in network including: professional development, technology, administration, funding, implementation and evaluation processes. The goal of CSDM was to examine the development of institutional support over time which led to inter-institutional collaboration policies and subsequently, increased teacher participation within and across education sectors. Therefore, to address the research questions, CSDM examined institutional support based on the study's theoretical proposition:

When implementing a BLN within and across education sectors, collaboration policy may be based on leaderships' sustained institutional support, increasing or decreasing with investments in teacher participation.

In summary, based on the tenets of IOR, past studies of rural schools, and post-secondary institutions, CSDM provided a substantive framework to examine if increases or decreases in institutional support influenced teacher participation in the network. The next section discussed the data collection process.

4.4 DATA COLLECTION

The study employed a mixed-method approach with semi-structured interviews and analysis of archival documents both of which were completed between April 2016 and January 2017. These methods provided a lens to examine the inter-institutional collaboration policies that developed within and among the collaborating institutions.

4.4.1 Semi-structured interviews

Semi-structured interviews (see Appendix A, interview guide) acted as the primary data collection vehicle (Babbie, 2013). The interview provided an opportunity to discuss past events with academic leaders and teachers as a way to establish the context for in which the BLN was created (Seidman, 2013). A snowball sampling technique was used to identify interviewees (Babbie, 2013). For example, the identification process began with an email to an academic leader at one of the state's 29 Intermediate Units (IU) in which a request for participants was sent

to every superintendent in the IU. Out of the nine possible public school districts, only one responded. The subsequent response led to interviews with academic leaders, administrators and teachers in the district. Previous research cites the disadvantage of snowball sampling when recommendations are based on similarities in relationships, and not across networks (Baltar & Brunet, 2012). This research came to fruition during a referral from the school district to interview the academic leaders at the Mountain Top Community College. Holly, the vice president of external relations, first agreed and then later declined to participate due to "time constraints." The school district contacted the college on my behalf, and after an exchange of emails, the community college agreed to participate. Subsequent interviews were conducted at all four institutions based on referrals from the first interview. A total of 15 interviews were conducted with 12 interviews in person, two interviews by phone and one interview by email. The interviews were conducted between April and May 2016. Follow-up questions were conducted by email to clarify responses. Pseudonyms were provided to protect the interviewees' identity. Table 2 on page 49 lists the interviewees by title, institution and institution type.

Table 2: Interviewees by name, title, institution and type

Name	Title	Institution	Type
Robert	Superintendent	Rocky Road School District	Public
John	Principal	Rocky Road School District	Public
Brittany	Head Teacher VLA	Rocky Road School District	Public
Michelle	High School Guidance Counselor	Rocky Road School District	Public
Mike	High School Chemistry Teacher	Rocky Road School District	Public
Philip	High School History Teacher	Rocky Road School District	Public
Todd	High School Special Education Teacher	Rocky Road School District	Public
James	President	Mountain Top Community College	Public
Fred	Vice President of Academic Affairs	Mountain Top Community College	Public
Holly	Vice President, External Relations	Mountain Top Community College	Public
Carl	Professor, Business administration	Mountain Top Community College	Public
Sarah	Administrative Assistant	Mountain Top Community College	Public
Sabina	Director of Online Learning	The Rolling Meadows University	Public
Julie	Registrar	The Columbia St. Ann College	Private
Susan	Administrative Assistant	The Columbia St. Ann College	Private

4.4.2 Archival documents

Institutional documents were collected from all four institutions. Documents included data collected from institutional websites, memorandum of agreements, annual reports, school board meeting minutes, and government reports. The document analysis provided supplemental data to support the interviews. For example, documents provided data related to institutional profiles e.g. enrollment, graduation rates, and tuition.

The documents from Rocky Road included a memorandum of agreement (MOA), data collected from the district's website, including more than 50 school board meeting minutes from 2012-2016. Data was also collected from the websites and annual reports of The Rolling Meadows University and The Columbia St. Ann College. The websites of the National Center for Education Statistics and the Pennsylvania Department of Education (PDE) also proved to be a valuable source for enrollment and other institutional data. (See Table 3, below).

Table 3: Documents by institution and type

Institution	Document Type
Rocky Road School District	District website, school board meeting minutes, MOA, government reports
Mountain Top Community College	College website, MOA, enrollment and graduation report, annual report, government report
Rolling Meadows University	University website, government report
Columbia St. Ann College	College website, annual report

4.5 DATA ANALYSIS

The data analysis employed three strategies—member checking, coding and content analysis (Babbie, 2013; Corbin & Strauss, 2008; Stake, 1995; Krippendorff, 2004). The analysis was based on my interpretation of data gleaned from the interviews and documents (Stake, 1995).

4.5.1 Member checking

Member checking provided interviewees the opportunity to review and edit transcripts for clarification purposes. The purpose of this process was to validate the accuracy of the interviewees' responses (Babbi, 2013) (See Table 4, page 51). Out of the 15 interviews, only

two interviewees did not respond to a request to review the transcripts and included Superintendent Robert, and Professor Carl. Phillip and Susan were the only interviewees to make edits to their transcripts, while Mike answered several additional questions by email.

Table 4: Member checking

Member Checking	
Step 1	Interview transcripts were created by extracting the data from the audio recordings and typing them into a Microsoft Word document.
Step 2	Transcripts were read as the audio was played back in order to ensure the accuracy of the transcripts
Step 3	Transcripts were then shared with interviewees providing them an opportunity for revisions within a one-week time frame.
Step 4	Transcripts were finalized after interviewees returned or communicated the review of the transcripts with no changes, and/or did not respond in the allotted time.

4.5.2 Coding

The purpose of the coding process was to organize the data and build evidence to understand the influence of leaderships' sustained institutional support on teacher participation. A six-step process was employed to code the interview and institutional documents, see Table 5, on page 52. The analyst included pre-selected codes in the following categories: professional development, technology, funding, administration, implementation and evaluation. (See Figure 2 on page 53). Opening coding, a process designed to breakdown categories for interpretation purposes, was also used to analyze the transcripts with the themes related to collaboration (Benaquisto, 2008). These themes included internal and external interactions, exchange of information and resources, and success (See Figure 2, page 53). Transcripts and documents were hand coded manually using a yellow highlighter and sticky notes. Once identified, the data was

extracted from the interviews and institutional documents and placed under the appropriate category based on the six codes and the major themes. When the coding process was complete, an analytic memo, or summary was created of each of the interview (Personal communication, Mike Guzenhauser, 2014). The data from the individual memos and documents were then aggregated by institution for comparison purposes.

Table 5: Coding process

Coding Process	
Step 1	Transcripts and documents were hand coded for each institution using a yellow highlighter and sticky notes while making notes in the margins.
Step 2	Transcripts and documents were analyzed with the following codes related to institutional support: professional development, technology, funding, administration, implementation, and evaluation processes.
Step 3	Transcripts and documents were analyzed with major themes related to collaboration, including internal and external interactions, exchange of information and resources, and success
Step 4	Data from the transcripts were categorized by the codes and major themes for each interviewee.
Step 5	An analytic memo was created for each interview.
Step 6	An analytic memo was also created for each institution.

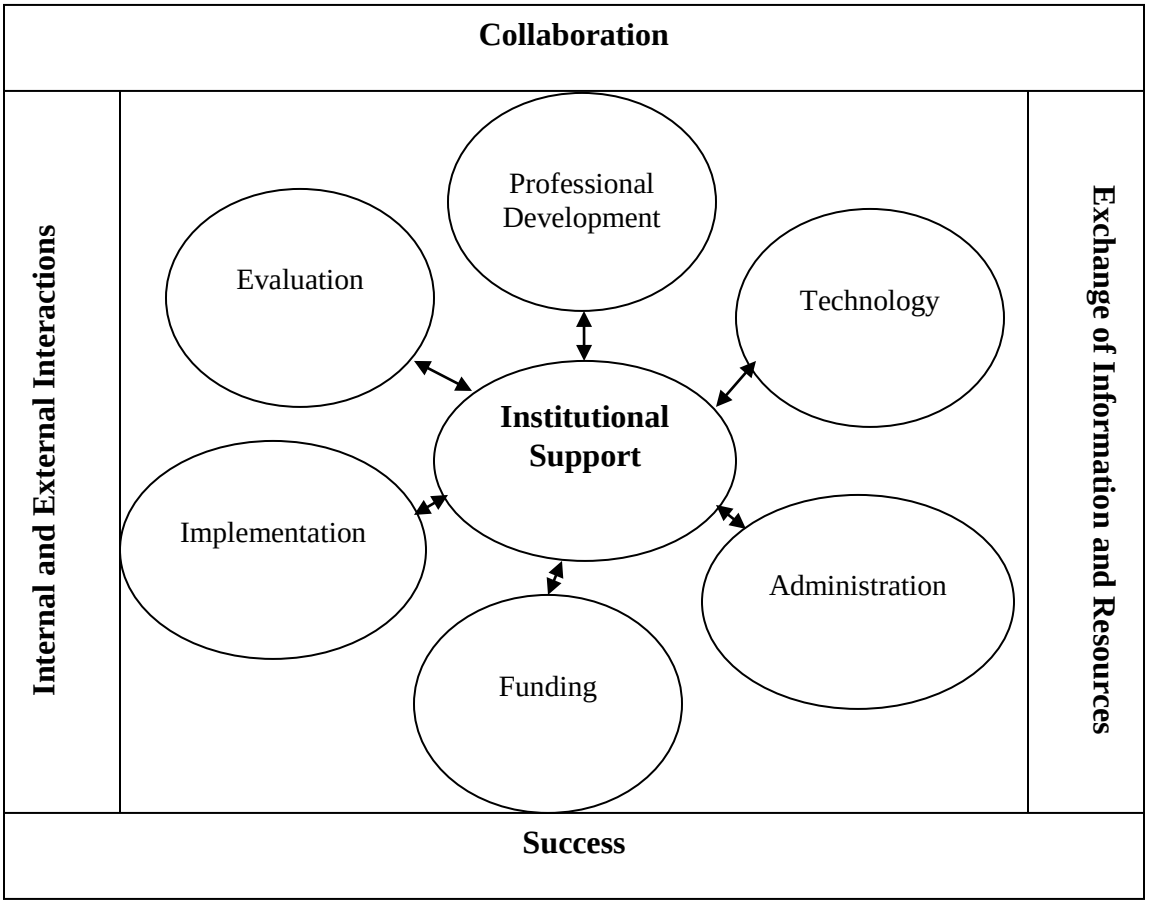

Figure 2: Codes and Major Themes

In summary, the interview and institutional documents provided a source of historical data to conduct an analysis of the content.

4.5.3 Content analysis

Krippendorff, (2004) described "content analysis as a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (p. 18). The data in this case was gleaned from interview and institutional documents. The analysis had three objectives to answer the research questions:

1. Determine institutional support policies

2. Compare and contrast support policies among the institutions
3. Determine if the policies led to expanded learning opportunities

This analysis draws from two different models to distinctly create a model to answer the research questions (Krippendorff, 2004). In Krippendorff's first model, "the content analysis compared the distinctions within one body of text and apply the same content analysis to each part" (Krippendorff, 2004, p. 93). In Krippendorff's second model, the researcher analyzes one body of text from different perspectives, correlating the results to test a hypothesis. (See Figure 3, page 55) (Krippendorff, 2004). For this analysis, the two models were combined to analyze the data as a way to compare and contrast the institutional support within and among the institutions and to build evidence to prove or disprove the theoretical proposition of this study. (See Figure 3, page 55). The process began by simultaneously analyzing the analytical memos of each institution. Inferences were made based on the six codes and major themes to answer the research questions.

For example, the codes helped to identify the availability, as well as, increases or decreases in support policies over time for each institution. This data also allowed for the comparing and contrasting of institutional support within and among each institution. Moreover, to answer the research questions, institutional support was measured, for comparison purposes by the availability and strength of collaboration policies between 2010 and 2016 within the context of each institution. The strength of the policies was measured by the number of policies in three categories. In the first category, institutions with one to two policies were categorized as weak. Institutions with two to four policies were considered moderate. Institutions with four to six policies in place were considered strong. These measurements helped to illustrate the increases and decreases in support policies for comparison purposes within and among the institutions.

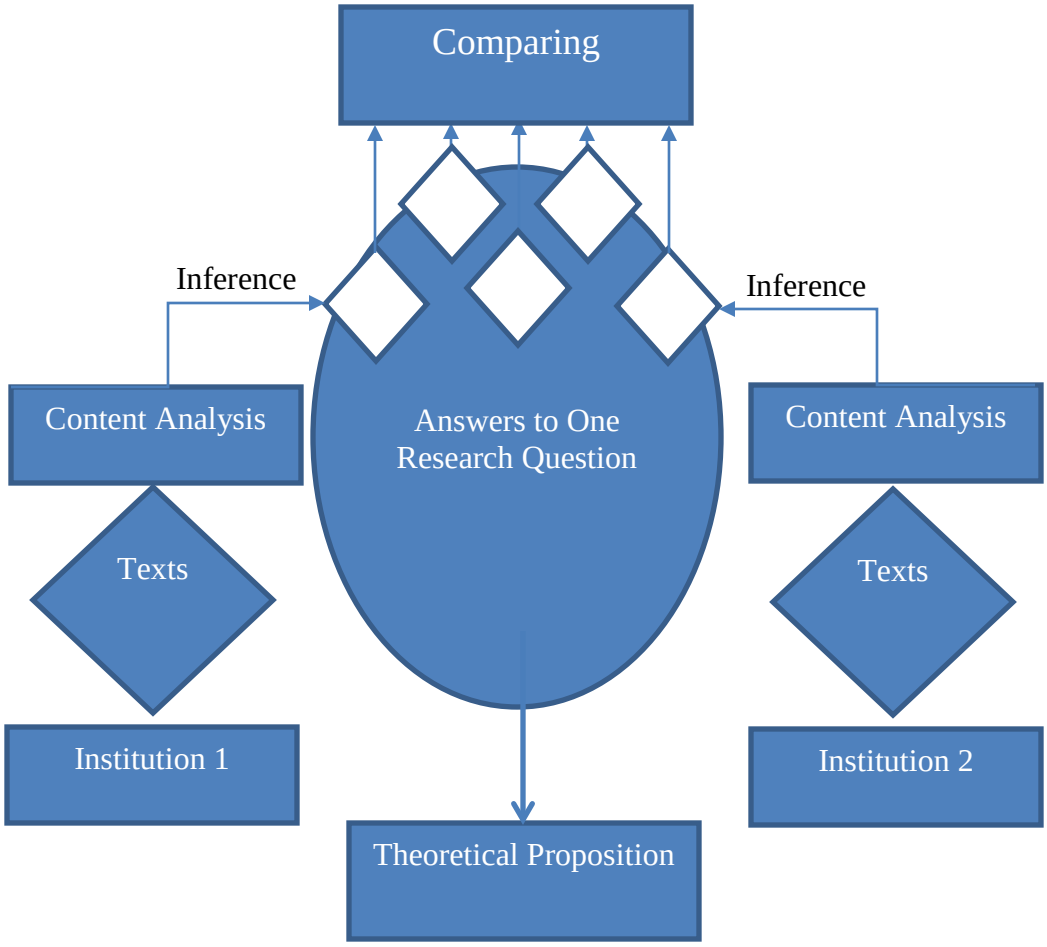

Figure 3: Content Analysis

Throughout the analysis, tables were created to display institutional support by policies between 2010 and 2016. Once the policies were identified, figures were designed to illustrate the strength of the policies in influencing the increase or decrease in resources within each institution. Lastly, a table was created to compare the enrichment courses taken over the past five years at each institution. The next section demonstrates the results of the analysis of the first research question.

4.6 RESEARCH QUESTION ONE

Research question 1: How did the Rocky Road School District and three HEIs collaborate both internally and externally to design, implement and evaluate a BLN? In this study, education institutions successful in implementing a BLN were characterized by the agreements and policies that sustained the actions of academic leaders to allocate resources in support of teachers teaching within and across the network (Garrison & Vaughan, 2013; Horn & Staker, 2014; Watson et. al, 2014).

In the early 2000's, academic leaders dedicated one room within the Rocky Road High School to deliver online courses. They called it their Virtual Learning Academy (VLA). The school district's head teacher, Brittany, commented that the VLA grew out of a need to create a pathway for "teen parents" to graduate from high school, as well as other students who had "repeated two, three years in the same grade level." As Brittany further elaborated:

> Teen parents were a group of those kids, but it was also kids who hadn't been successful for whatever reason—whether it was an academic need, behavioral need, an emotional need, students that just couldn't experience success in a traditional classroom.

Brittany also noted that the superintendent at the time challenged administrators to find a solution to help these students succeed by offering online courses as a "means to help junior high students that had repeatedly failed." As Brittany further explained:

> They actually had a classroom aide overseeing the day-to-day operations in a very small classroom... They utilized a contracted provider, with contracted teachers that provided the education and instruction to the students that were in that room…

At the time, not one district teacher taught online courses. The program started to experience some success on a very small scale around the time Act 88 passed, allowing students

to attend cyber-charter schools. Superintendent Robert noted that with the enactment of Act 88, the district experienced an exodus of students from across the board including accelerated and remedial students. As Superintendent Robert further explained:

> People were unhappy… They didn't like the principal. They didn't like a teacher.
>
> There was a lot of discontent, creating a money crisis in the district.

Principal John explained that the district paid out $40,000 the first year and $400,000 the second in tuition reimbursements to charter schools. As Brittany explained the competition had school officials asking:

> How can we afford to keep our doors open if all these kids are leaving? What can we do to meet the needs of these students to keep them in our buildings...?

According to the Pennsylvania Department of Education, Figure 4 below represents the number of students who had left the district to attend a cyber-charter school from 2001-2015

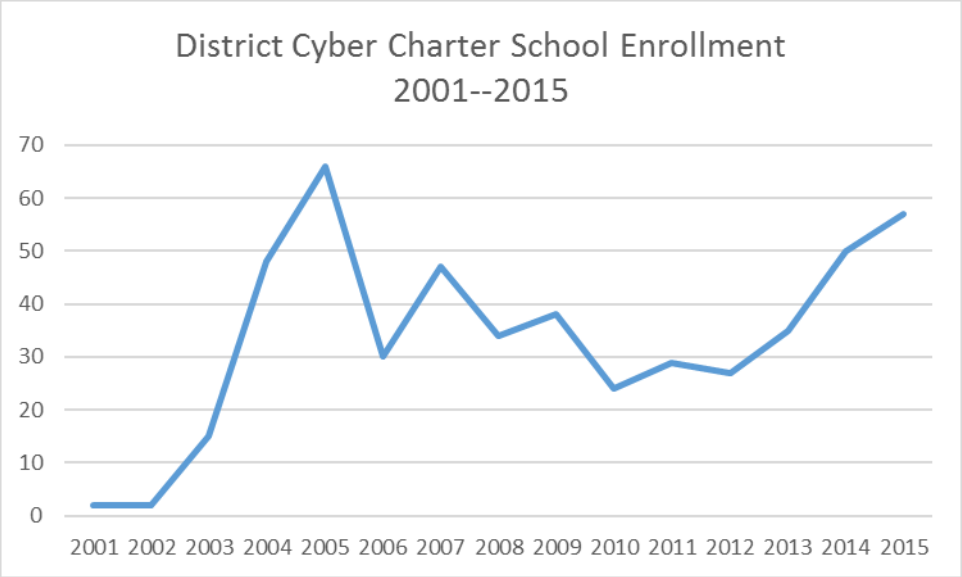

Figure 4: District Cyber School Enrollment (2001 – 2015)

The cyber school legislation forced district leaders to reevaluate the purpose of the VLA and ask as Brittany elaborated:

Does it just have to be (for) students that haven't been successful? Could we accelerate students? Could we provide other learning opportunities?

As a result, the district changed the vision and the name of its virtual academy to better reflect its purpose to provide customized learning opportunities (School Board Meeting Minutes, 2012-2013). The board also created a head teacher position, and hired Brittany to oversee the program (School Board Meeting Minutes, 2012-2013).

Prior to the creation of the VLA, the school district had informal agreements with several HEIs offering dual enrollment and other enrichment courses but not through the use of technology. One such agreement was with a local private college, Columbia St. Ann College. The agreement allowed Rocky Road students to leave during the day to take courses at the college. The district also had an informal agreement with Rolling Meadows University and advertised its online course offerings to high school students. The district had another informal agreement with Mountain Top Community College to offer dual enrollment courses in the high school but then formalized the agreement in 2012 (School Board Meeting Minutes, 2012-2013). The district also contracted with seven private vendors for online digital content and access to their learning management systems. They include: Advanced Academics, The American Academy, Apex Academy, Blended Schools, Edgenuity, Keystone School and Odysseyware Academy.

In summary, the VLA started out in one-room with a few loosely connected computers and has evolved into a BLN through the adoption of inter-institutional collaboration policies with private vendors and several institutions of higher education. Figure 5 on page 59 illustrates the network. The dotted lines indicate the informal agreements Rocky Road has with Rolling Meadows University and Columbia St. Ann College. The solid lines demonstrate formal

agreements and the use of technology to link the school district with Mountain Top Community College and the seven private vendors through the district's VLA.

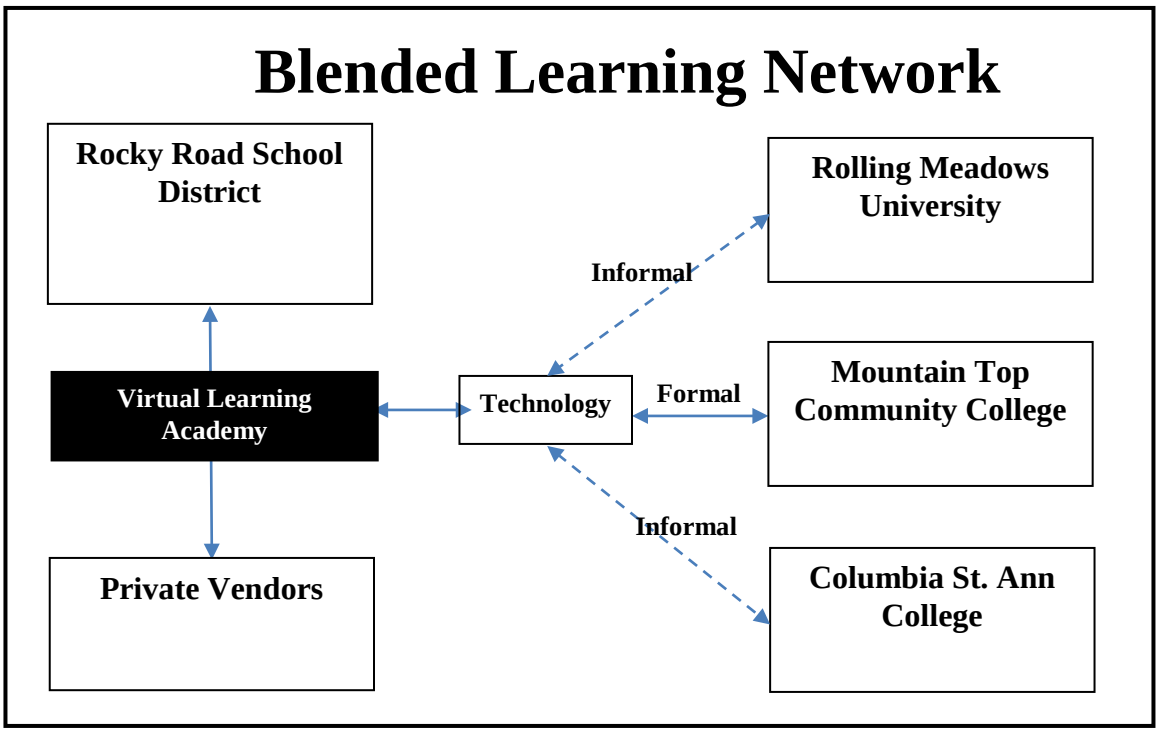

Figure 5: Blended Learning Network

4.7 RESEARCH QUESTION 1-A

Research question 1-A: How did institutional policy support, both formal and informal, differ across the four institutions? The purpose of this section is to compare and contrast the increases or decreases in institutional support over time across the four institutions in the following areas: professional development, technology, administration, funding, implementation, and evaluation in the context of a BLN.

4.7.1 Institutional Support: Professional Development

Researchers argue that the combination of online technologies and the traditional classroom creates a new model of education delivery, requiring a different approach to pedagogy (Horn & Staker, 2014; Powell et al., 2015; Werth, et al., 2013). Professional development allows instructors to understand best practices and experience the differences of BL when compared with the traditional classroom. It focused on personalizing instruction for a student-centered, learning environment (Murin & Watson, 2012; Powell et al., 2015; Werth et al., 2013).

In 2010, The Rocky Road School District and Mountain Top Community College did not offer professional development opportunities related to online learning. However, by 2016 both institutions provided in-house training sessions, self-paced online training activities, and support for instructors to attend conferences. In contrast, Sabina commented that The Rolling Meadows University developed a "mandatory five-week instruction course that the faculty must take before they teach an online course" through the university's learning technology center. The program evolved over time since the university offered its first online course in 2002. In comparison, Columbia St. Ann College offered voluntary one-on-one training sessions for faculty. The main difference was the policies that mandated instructors trained prior to teaching online courses among the four institutions. For example, instructors in the public institutions (Rocky Road, Mountain Top and Rolling Meadows) were required to complete training prior to teaching online, while instructors at Columbia St. Ann College were not. Table 6 on page 61 demonstrates the institutional support available for professional development in 2010 compared to 2016 among the four institutions.

Table 6: Inter-institutional Collaboration Policies: Professional Development

Institution	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top School District	Not Available	Available
The Rolling Meadows University	Available	Available
The Columbia St. Ann College	Not Available	Not Available

State law required administrators and teachers in the secondary institutions to maintain their credentials by completing continuing education courses. In contrast, academic leaders in post-secondary institutions were not mandated to participate in professional development activities. While training opportunities are available sector-wide, policy influences participation. The next section compares and contrast the policies related to the technology infrastructure among the four institutions.

4.7.2 Institutional Support: Technology

In previous studies, administrators and teachers expressed concern about the lack of technology infrastructure and support in rural areas (Kolat, 2014; Picciano & Seaman, 2009; Murin & Watson, 2012; Werth et al., 2013). In this case, technology was prevalent throughout all four institutions; however, the access and support needed to create and implement BL was not. For example, maintaining a high-level of technology has been a goal of the school district for many years. As Rocky Road's High School Principal, John explained:

> We probably have more computers and IPODs, IPADs and tablets... for our students than I would say most districts our size… Technology is so prevalent now in a regular social

> studies or a regular math or science class that it's, it's starting to balance out. A few years ago, several years ago, I would have said that the technology is more prevalent in the virtual lab, but now almost every one of our classrooms has their own computer cart…

Technology support is central to day-to-day operations. The district has three technology experts in place including two network coordinators to support Apple and PC computers as well as the VLA. As Rocky Road's head teacher, Brittany explained:

> Someone has to be available to answer questions or solve those problems when they happen. When a computer doesn't work or the students have a problem, they have to have someone they can reach out to. And you might not get a solution right now, but it's someone who will find out what that solution is and make sure it gets put into place so that it resolves the issue. Our technology department has been a huge asset in problem solving things.

While Rocky Road appeared to have a solid technology infrastructure and support, it doesn't have a dedicated learning management system (LMS) like "Blackboard." The LMS is determined by a partnering institution or vendor. In comparison, all three HEIs had a dedicated LMS. For example, Holly noted that Mountain Top Community College provided students and instructors access to an "online portal," offering a variety of resources including curriculum, syllabus, digital content (i.e., textbooks,) quizzes, and evaluation tools. The college's IT staff maintains the portal and provides tech support as needed. Similarly, The Rolling Meadows University's LMS (D2L) provided an array of online documents and training videos ranging from creating a class to discussion boards, access to quizzes, surveys, and how to integrate third party software. As Sabina noted, "It is just a really great vehicle to move, not only to pass

(distribute) the quizzes, but just information." Under the licensing agreement, D2L provides "24 by 7" help desk services for faculty and students. According to Sabina, if faculty or students are online at 3 o'clock in the morning and can't get their paper to load to the drop box, they can get the help they need. In comparison, the IT department at Columbia St. Ann College, trouble shoots technology devices for students, faculty and staff and maintained the college's LMS.

Table 7: Inter-institutional Collaboration Policies: Technology

Institution	2010	2016
Rocky Road School District	Available	Available
Mountain Top School District	Available	Available
Rolling Meadows University	Available	Available
Columbia St. Ann College	Available	Available

In summary, all four institutions had adopted technology within their respective institutions. Table 7 above demonstrates the availability of institutional support policies related to the technology between 2010 and 2016. The next section compares and contrasts administrative support across the four institutions.

4.7.3 Institutional Support: Administration

Blended learning adds a new layer of technical complexity at the district and school levels for both academic leaders and instructors requiring policies to address administrative support issues (Horn & Staker, 2014; Powell, 2014; Werth, 2013).

Prior to 2010, neither Rocky Road School District nor Mountain Top Community College provided teachers with administrative support related to online learning. In contrast,

Rolling Meadows University had administration's support early on in their online programs. By 2012, both Rocky Road and Mountain Top had implemented administrative support policies. For example, in 2012 the school district supported teachers in the VLA administratively by hiring a head teacher, as well as, a para-educator, and an administrative assistant. In comparison, the community college hired a vice president of external relations to manage their dual enrollment program. The college now supports teachers in the BLN with two academic leaders and three administrative support personnel. The community college also relied at any given time on 10 to 18 faculty liaisons, and two faculty coordinators to support high school instructors. The college's library also has a dedicated person to provide instructional design services for faculty building online courses. As Holly explained, "You have to have support staff to help faculty learn to do all of those pieces..." In comparison, the university has a single administrator overseeing the strategic and day-to-day operations of the online operation, while Columbia St. Ann College does not support online instruction administratively. Table 8 below illustrates the availability of institutional support policies related to administrative support between 2010 and 2016.

Table 8: Inter-institutional Collaboration Policies: Administration

Institution	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top School District	Not Available	Available
The Rolling Meadows University	Available	Available
The Columbia St. Ann College	Not Available	Not Available

In summary, the three public institutions (Rocky Road, Mountain Top, and Rolling Meadows) each have developed policies related to administrative support. The Columbia St. Ann College has not. Moreover, administrative support for instructors in the school district is based on the academic needs of the student. For example, teachers received additional support for students with learning disabilities taking online courses. In contrast, administrative support is built into the day-to-day processes of the university's online offerings i.e. online library, tutors and technology support for students.

4.7.4 Institutional Support: Funding

The lack of local and state funding to implement BL is well documented, leaving many rural districts to fend for themselves (Irvin et al., 2009; Kolat, 2014; Murin & Watson, 2012; Picciano & Seaman, 2007; Powell, 2014; Vadell, 2013; Watson et al., 2011).

The Rocky Road School District has had policies related to funding since the early 2000s. Today the district funds its network through multiple sources including the district's operating budget, grants, an endowment, and in some cases, parents. Superintendent Robert noted the board of directors authorized the "initial investment" and continues to budget for online courses through the district's annual operating budget. Grants are another source of revenue. The district applied for any grant they think would help shape and drive the vision for the VLA. As Superintendent Robert explained, "It doesn't cost that much to educate in a true online environment; a blended environment is costlier because of the different things you have to do." For example, the district received a three-year, $2.5 million federal/state school improvement grant with $900,000 earmarked to train teachers to teach in a blended learning environment. Rocky Road's Principal John commented that the district also takes in "a significant sum of

money" each year from an endowment to "maintain current technology." Lastly, parents are another source of funding when students take online courses over the summer, as Brittany explained:

> One of things that we do in the summer is we break the courses up a little bit more, so it allows parents to pay a smaller amount... We have also enabled the parents to make payments, so, we are a low income district – we realize that money is an issue, so we try to meet the individual needs.

In comparison, the community college funded their dual enrollment program through the college's budget and credits sold. Students in the dual enrollment program pay $58 a credit up to 29 credits or $1,682 maximum (college website, 2016). In contrast, students taking courses online or on-campus pay the college's full tuition rate of $203 per credit (college website, 2016). According to the community college's president, James, the college sells approximately "6,000 credits" a year to students with many at a "highly discounted rate." In contrast according to Sabina, the university funds its online initiative as a "line item" through the provost's budget, whereas, Columbia St. Ann College doesn't differentiate between online and traditional classroom courses. Table 9 on page 67 demonstrates the availability of funding between 2010 and 2016.

Table 9: Inter-institutional Collaboration Policies: Funding

Institution	2010	2016
Rocky Road School District	Available	Available
Mountain Top School District	Available	Available
The Rolling Meadows University	Available	Available
The Columbia St. Ann College	Not Available	Not Available

4.7.5 Institutional Support: Implementation

Clearly, faculty participation is a key element to successful implementation of a BLN. Researchers have pointed to the importance of collaborative leadership when implementing BL in phases including: a) buy-in, b) policy integration, and c) course delivery (Garrison & Vaughan, 2013).

4.7.5.1 Buy-in

Previous studies revealed the importance of obtaining “buy in” through “top-down” and “bottom-up” approaches (Carbonell, 2013; Horn & Staker, 2014; Laurillard, 2013; Porter, 2014). Implementation in the case of the Rocky Road School District and Mountain Top Community College required top-down support with both institutions forming advisory committees while bottom-up innovations drove online learning at the Rolling Meadows University. For example, in the school district, the superintendent formed a committee that represented all levels of the organization to oversee the direction of the program. The committee consisted of board

members, administrators, teachers, parents and members of the community. Teacher buy-in, however, took time to attain. As Brittany explained:

> I think buy-in is important. Student success was huge. I got a lot of teachers (willing to teach) because a particular student tried online and suddenly became successful and did it in a big way. And we got them from that point on. Kids that historically struggled that suddenly found success; it was a wakeup call for a lot of folks. Then when teachers saw other teachers being successful at it they said, if they can do it, why can't I, so let me try.

Superintendent Robert also commented on the importance of monitoring buy-in for the program to succeed:

> The hardest part with that is I would say is buy-in because when I got here we had a high school principal that understood it, but didn't want to leave the students go. I still have an elementary principal: 'I don't like online' and so very negative when it comes to Brittany and what she is doing… so buy-in I think is one of the things I have to monitor and make sure it's happening because it is a program that I want to have happen and getting them to use it. In the last four years, I have seen a great change in our high school principal doing very, very well…

In comparison, Holly noted how the community college formed an advisory committee with faculty making up "75 percent" of the members including the president of the union. As Holly explained:

> The best thing I did was put the faculty union president on my committee. She was there to say yay or nay — 'no, you can't do that' or 'yes,' ...and she could answer it (the question) in the moment.

In contrast, online learning at the university began as a “grass roots,” effort with faculty experimenting with a variety of distance education modalities at the end of the twentieth century. Online learning has evolved ever since based on faculty negotiations through the university’s collective bargaining agreement (CBA). In comparison, faculty participation at the Columbia St. Ann College is unknown. What is known, according to Susan, is that the board has come to realize that “online’ learning is not a trend, and “they don’t want to be behind on it.” According to Susan, the college has formed an online committee charged with examining “what’s out there, what programs we can use.” Table 10 below illustrates the institutions that gained some buy-in within the institution between 2010 and 2016.

Table 10: Buy-in by institution

Institutions	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top Community College	Not Available	Available
The Rolling Meadows University	Available	Available
The Columbia St. Ann College	Not available	Not available

4.7.5.2 Policy integration

According to some researchers, blended learning works best when the institution's mission and goals are aligned with and address the needs of students, faculty, and the institution simultaneously (Moskal et al., 2013, p.20), and are supported by well-thought out policies for strategic adoption. In the case of the Rocky Road School District, academic leaders made a number of policy changes to the student handbook in regards to class ranking, attendance and graduation; however, policies drove the enrollment process. For example, according to the district’s website, students must meet the following criteria prior to enrolling in the VLA:

- Read and comprehend on their grade level (with accommodations)
- Express thoughts and ideas in essay form (requires essay assignments, reports, and test questions)
- Must be recommended by Guidance Counselor or Administrator
- Must need an alternative method of instruction
- May enter Lab maximum of two periods per day
- 30-day evaluation period (if unsuccessful, students will return to regular schedule)
- Regular attendance is necessary for success in the online learning environment
- Must commit to succeed both online and in the traditional classroom
- Must maintain passing grades in all courses, both online and in traditional classes
- Must be able to work cooperatively (School district website, 2016)

Academic leaders at the building and district level review requests on a case-by-case basis. Once the referral is approved, it sets in motion a series of events as Brittany explained:

> We pull together a meeting involving teachers, administrators, parents, the students… try to figure out what's going on; what the student needs; how do we address those needs; what things we need to put in place. If out of that meeting, if it's determined that some sort of online or blended learning scenario needs to happen, we identify what that is... all requests go through the superintendent's office; go to the principal, the building principal… both of those folks have to agree; once that happens now those courses are advertised out to our teachers…

If a referral is approved, a contract is created for all parties to sign including parents, students and teachers for every online class. The three-page contract includes a student page, a teacher's page, and a final page, outlining the course schedule. The student contract provides an

overview of what is expected of students, and looks like a college syllabus outlining class assignments, deadlines and scheduled tests. The contract also allowed students to take an online course on a "30 calendar day trial" basis penalty free, explained the head teacher. The contract is designed to encourage participation in the VLA no matter what a student's academic background as Brittany further explained:

> Our accelerated students who want to try an online class but are very cognizant of: 'what if I don't like this; what if this damages my GPA' ...those kinds of things. There was a lot of concern, so we wanted students to take a chance on an online class but we also realized it's not for everyone. We have gifted kids who aren't successful online, and we have remediation kids that are not successful online, but we have remediation kids that are successful. We have gifted kids that are successful. There is no real descriptor of what makes a student successful.

The contract also included an activity clause requiring students to log into their accounts at least once every 15 days. If students are unable to complete their assignments in the allotted time frame, there is also an "extension" clause allowing students to purchase extra time at $30 for every seven calendar days. Many of the courses have "pacing guides" automatically built in the program letting the students know if they are on track to complete the course on time, explained an administrator. According to Brittany, the contract is designed to reduce "misunderstandings and miscommunications," by clearly outlining expectations for all involved. Once a student referral is approved, the course is advertised out to the teachers. As Brittany elaborated:

> The teacher that teaches the course has the first right to teach it regardless, if whether she is a first year teacher, tenured… then if that teacher doesn't want it, it goes to the

department by seniority. If no one in the department wants it, then it goes out district wide. So anyone in the district with that certification can teach it, and if no one responds, we then have contracted providers that we use…

The contract also outlined teacher compensation. Teachers who teach online are compensated per student in addition to their regular salary. Per the contract, teachers are required to teach seven periods a day and do not receive a reduced course load to teach additional courses online. In contrast, an MOA drives policy integration at the community college. The implementation process begins once an MOA is signed between the community college and the partnering school district. The agreement outlines two options for implementation depending on the school district. In the first option, if the school district is outside of the county where the community college resides, students are able to earn up to 29 college credits in a traditional classroom taught by "credentialed" high school teachers in the school district. Under this option, courses follow the school district's academic calendar, and are taught by high school instructors. These instructors must hold a master's degree in their field of study, and agree to use the college's curriculum and complete training.

Under the second option, only available to the seven school districts within the county where the community college resides, high school students are permitted to take an additional 31 credits online, for a total of 60 credits. Under this option, high school students follow the community college's academic year by semester. In most cases, this allows them to earn their associates degree while in high school. According to the college's website, students must complete an application; submit a letter of recommendation from their high school principal or guidance counselor and transcripts for consideration. Students seeking an associate's degree in high school are required to take English 110 and Math 145 as part of the curricula. Unlike the

courses offered through private vendors, students are also required to take a placement test and score high enough on the tests before they are permitted to register for courses at the community college. Students register for classes on the community college's website and receive a transcript of their grades at the end of the semester. In general, these courses take the place of regular high school courses. As Brittany further explained, "However, some seniors take college courses that go above the required number of credits needed for graduation."

In contrast, according to Sabina, the "unionized environment" of the university formally outlined how online classes are implemented in the collective bargaining agreement (CBA) under Article 42 A. (See Appendix A). In comparison, the IT administrator at Columbia St. Ann, meets with the faculty to make sure the course is in compliance with the American with Disabilities Act (ADA) explained Susan. (See Table 11, below).

Table 11: Policy integration

Institutions	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top Community College	Not Available	Available
Rolling Meadows University	Available	Available
Columbia St. Ann College	Not available	Not available

In summary, all three public institutions (Rocky Road, Mountain Top, and Rolling Meadows) made numerous policy changes to implement blended learning, while the changes at Columbia St. Ann College were minimal.

4.7.5.3 Course delivery

Some researchers believe that in a BL environment, the teacher's role transforms from lecturer to facilitator (Benson, 2011; King & Arnold, 2012; McGee & Reis, 2012). Successful course delivery required teachers to: a) align technology with instruction, b) provide ample opportunity for student interactions, and c) consistently communicate with students the expectations of the course (Benson, 2011; King & Arnold, 2012; McGee & Reis, 2012). In this case, data related to course delivery is limited. The use of technology in the classroom was completely up to the instructors at all four institutions. In the Rocky Road School District, the majority of administrators and teachers in this study concurred that there is a difference between teaching in a traditional classroom and a blended learning environment. While it's up to individual instructors to teach as they see fit, technology has changed the traditional classroom. As Principal John explained:

> … the days of standing in front of and talking at kids no longer happens. It's: you introduce instruction and then they (students) get their laptops out... They (teachers) use the smartboard and they are presenting with PowerPoints and manipulating things on a smart board.

One teacher, Mike, also noted the difference between teaching in a lecture-based classroom and online:

> I find myself now moving from somebody who is a lecturer to more of a facilitator for learning... I'm there to just basically facilitate the learning that they're doing and help them along the way.

In another instance, Mike applied a “flipped” classroom technique where students are required to watch videos on a specific topic prior to class, laying the ground work to generate in-class discussions. In contrast, the data was limited on how instructors specifically used technology in the community college and the university. However, Susan remarked that Columbia St. Ann College had a number of “older faculty” who hadn’t fully bought into online learning. (See Table 12, below).

Table 12: Course delivery

Institution	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top School District	Not Available	Available
The Rolling Meadows University	Available	Available
The Columbia St. Ann College	Not Available	Not Available

In summary, Rocky Road, Mountain Top and Rolling Meadows had policies related to implementation while Columbia St. Ann did not. Table 13 below displays institutional support polices related to implementation among the four institutions.

Table 13: Inter-institutional collaboration policies by year available: Implementation

Institution	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top School District	Not Available	Available
Rolling Meadows University	Available	Available
Columbia St. Ann College	Not Available	Not Available

4.7.6 Institutional Support: Evaluation

Research related to the evaluation of BL programs in a rural context is limited (Cavanaugh, 2009; Hobbs, 2004; Irvin, 2009; Tucker, 2007; Weiss, 2014). Only one report in the past five years highlighted the methods and findings of evaluating how one state attempted to expand educational opportunities through blended learning to rural youth in North Carolina (Weiss et al., 2014). They pointed to student and faculty surveys, student grades, and classroom observations as acceptable evaluation techniques (Weiss et al., 2014). In this case, academic leaders and instructors used informal and formal evaluation techniques that ranged from evaluating course completion and graduation rates to more formal student and faculty surveys.

Academic leaders in the Rocky Road School District evaluated the success of the program informally, as Brittany explained:

> I think we look at students' success, and what students have been successful. What groups of students have been successful? I think that's how they have determined success in the program. Our graduation rate is very good. The students are doing well. Students who haven't historically done well are doing well. It's very interesting because we have taken students who have failed essentially repeatedly. We have put them online and many times they are not online one hundred percent; online has given them the experience of success, and that sort of transfers into the traditional classroom and things tend to be better for them so ultimately, the evaluation of the program comes back to the student's success in the program…

In contrast, the standards set by the National Alliance of Concurrent Enrollment Partnerships (NACEP) provided a baseline for community college administrators to evaluate the

dual enrollment program through site visits, classroom observations, and student surveys as well as sample work. As Business Professor Carl explained:

> (Instructors) are going to be observed on a rubric – scored on a rubric, not the instructor, the delivery of the content. They are going to review the text books. They are going to look at some student work, and if things aren't met, I put them on a program modification plan, and they literally could be decertified to teach the course. It must be equivalent to an on-campus course.

At the end of term, students receive an end-of-course survey to evaluate the course, not the instructor, as Carl further explained.

> The survey queries students to see if they feel better academically prepared from taking this course and ask if they had received a syllabus. The results are shared with the high school instructor. If the administration detects a trend across disciplines, they will place the topic for discussion on the annual meeting in the fall.

In comparison, the university evaluated courses through student and faculty online surveys. The Columbia St. Ann College doesn't distinguish between blended learning and traditional courses; therefore, all courses go through the same course reviews as other classes through the curriculum committee (See Table 14, on page 78).

Table 14: Inter-institutional Collaboration Policies by Year: Evaluation

Institution	2010	2016
Rocky Road School District	Not Available	Available
Mountain Top School District	Not Available	Available
The Rolling Meadows University	Available	Available
The Columbia St. Ann College	Not Available	Not Available

In summary, out of the four institutions, only the community college and the university had formal processes in place to evaluate their respective programs through end-of-the semester student and faculty online surveys. However, Professor Carl explained that the community college takes it a step further by conducting site visits to observe high-school teachers in the classroom on a three-year rotation basis.

4.8 RESEARCH QUESTION 1-B

Research question 1-B: Did institutional support policies, both formal and informal, influence collaboration? And if so, how? Collaboration has been described as the interactions between academic leaders and instructors (Sandfort & Milward, 2008). Interaction has described as an exchange of information and resources that falls under the umbrella of institutional support (Sandfort & Milward, 2008). The purpose of the next section is to discuss the collaboration policies within the institutions between 2010 and 2016.

4.8.1 Collaboration: Rocky Road School District

In 2010, the district implemented technology and funding policies, but had yet to address the policies related to professional development, administration, implementation and evaluation processes.

Brittany commented that when the district offered online courses in the early 2000s, not one teacher agreed to teach online for "fear" of losing their jobs. Even some building-level academic leaders and administrators were "very skeptical." By 2010, the district hired two academic leaders with experience in building and managing an online school. The new leadership team brought awareness of the pedagogical technique of blended learning by training every teacher in the district over a three-year period. For example, the district received a federal grant to train teachers and equip each department with computer carts filled with individual laptops for students to use during class. Funds were depleted after three years leaving at least one department without computers. Teachers in Mike's department decided not to participate in the blended learning initiative because of their lack of access to needed technology. "My department couldn't embrace it," explained Mike. However, the district's IT director found the funds to purchase a Microsoft Surface Pro laptop equipped with Office 365 for Mike. While Mike admits, he is not a "cutting-edge guy" when it comes to technology compared to other teachers, he took the initiative and started watching YouTube videos to glean ideas on how to use it in the classroom. He also attended a nearby conference. As Mike explained:

> I went and my whole goal was I'm looking for Microsoft Office 365 opportunities. Well, there just happened to be two or three folks there that were Microsoft innovative educators and trainers... They were teachers, but they had also been using these tools and they did workshops on almost every tool that's in this Microsoft Office packet. That's

> where I learned about Snip and I got the idea of using Yammer. I submitted to go to this conference and the district came up with the money, sent me down there for three days and I went to all those. They didn't put any restrictions on me about it but I had in my head that I'm going to Microsoft Office stuff. Just all kinds of tools I'm watching these things happen these people are talking about what can be done with it and certain things just hit me really. So I came right back and said to my students we're going to try this and first time I tried it, it worked okay and they were kind of excited like 'wow we can get help while we are at home.'

After the conference, Mike created lab notebooks, implemented the "flipped classroom" concept and offered AP courses online in his field of expertise to advanced students. In this instance, Mike, who had originally declined to participate decided to take part because of the administrative support, technology, funding and the professional development he had received. Moreover, Superintendent Robert had encouraged teachers to attend technology conferences as a way to "drive their own professional development," and bring back innovative ideas on how to apply technology to the traditional classroom. Figure 6 on page 81 illustrates the collaboration policies available between 2010 and 2016.

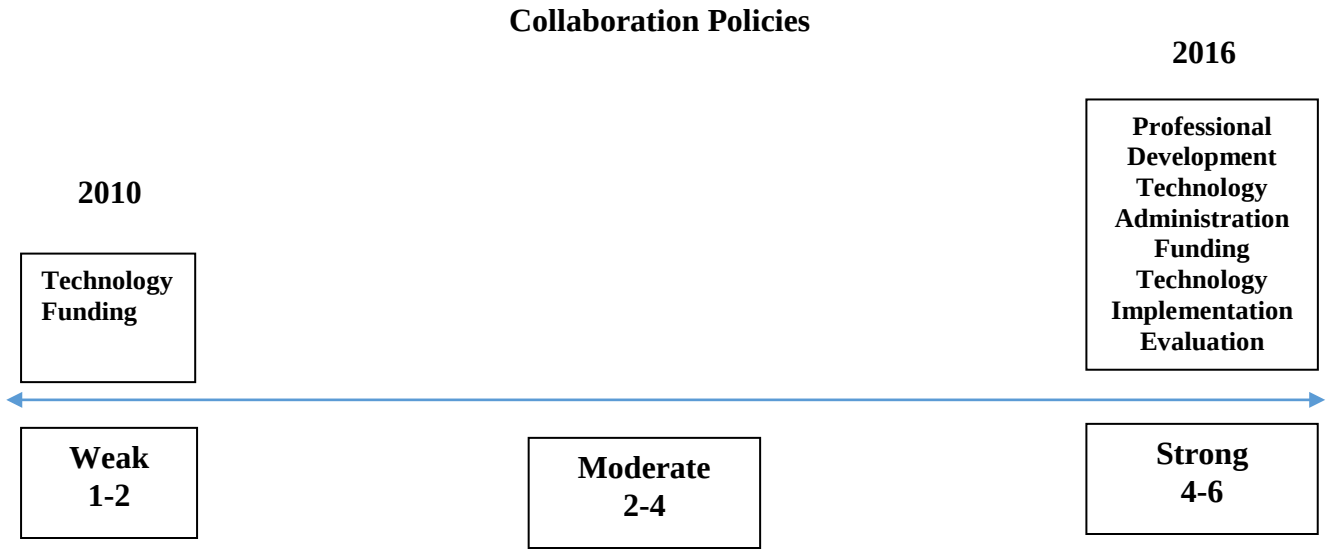

Figure 6: Collaboration Policies

In summary, in the early years of the VLA, Rocky Road School District had adopted policies related to technology and funding; however, over the next six years, the academic leaders implemented additional policies related to professional development, administration support, implementation and evaluation polices. Chapter 5 illustrated how these policies increased teacher participation in the school district. The next section examined institutional collaboration polices at the community college.

4.8.2 Collaboration: Mountain Top Community College

In 2010, the college had adopted policies related to technology, but not in the areas of professional development, administration, funding, implementation and evaluation processes. Under the initial agreement, Rocky Road high school teachers would submit a syllabus to a community college instructor for approval to teach courses. The program had little oversight,

which is one reason why Mountain Top received less than satisfactory marks from the Middle States Commission on Higher Education. According to Professor Carl, the commission's report indicated that the college needed to gain more control of its dual enrollment program. As Carl further explained, the program lacked "academic integrity." Other administrators echoed similar thoughts about the program lacking credibility, and rigor with concerns of grade inflation adding to the negative perception of the program among instructors in the college.

In response, Mountain Top's President James, hired Holly, Vice President of External relations, to oversee the program with the goal of achieving NACEP accreditation. Over the next four years, and under Holly's leadership, the college implemented additional policies in the areas of professional development, administration, funding, implementation and evaluation processes based on NACEP standards. Consequently, the college mandated training for high school teachers and assigned faculty liaisons in support of teachers. The college also created master syllabus for each course, and an online portal of digital resources for teachers and students. These changes provided the oversight, processes and policies the college needed to earn NACEP accreditation in 2014 (college website, 2014). As Holly commented, "It's a highly structured program."

Additionally, with faculty members mandated to complete training prior to teaching online courses, the online portal became a natural pathway to train instructors. Holly described the online portal as "massive" with PowerPoint presentations, as well as access to the college's YouTube channel of instructional videos. Professor Carl elaborated:

> Our portal... those resources are critical to get out to my faculty members… For example, the common assessments that we use in all of our classes and our grading rubric, and the materials from our professional development meetings...

The online portal also acts as a major communication pathway between the faculty and academic leaders to integrate technology in the classroom as Fred, Vice President of Academic Affairs, further elaborated:

> As new tools are brought online IT administrators will need to get faculty feedback to ensure that new tools are properly implemented. For their part, faculty will need to make IT administrators aware of the online tools they use in their classes so IT can provide appropriate technical support to students. Faculty and administrators will need to be in regular communication regarding the function of the college's online course system.

These opportunities also led to increased faculty participation with administrators working with faculty to host workshops, seminars, and guest speakers. Technology access also influenced the internal exchange of information and resources as Fred further explained:

> In most ways additional collaboration is needed for course ramp up and training for the faculty who have little or no experience with on-line teaching. For instance, faculty teaching online need to work closely with IT administrators to ensure that there is appropriate technology in place to meet their learning objectives online. This might entail IT administrators purchasing additional tools or software to support certain classes/programs.

Moreover, administratively, the dual enrollment program required academic leaders and faculty members to work closely together as Professor Carl described, "...like a hand and glove." Holly and Carl share administrative duties and meet on a weekly basis. Holly manages the day-to-day operations of the program i.e. contracts, administrative duties, scheduling courses, and ensuring the NACEP standards are met. Professor Carl, who also acts as the faculty coordinator,

trains the college's faculty liaisons, conducts site visits and helps collect assessment data for the program. Funding has also increased participation providing the financial resources to hire adjunct faculty, while full-time faculty received release time to work as "liaisons" in the DEP. Implementation also required a higher level of collaboration to address the unique challenges associated with certain courses or programs as Fred explained:

> When it comes to bringing new courses/programs online, faculty and administrators need to work together very closely. Certain courses/programs are difficult to translate to an online environment. Such courses may require additional prep time or the introduction of new technology to make the course a success online. For instance, teaching Intro to Composition online is much easier than teaching Biology Lab 1 online.

Evaluating the dual enrollment program also required collaboration policies to allow for collecting and sharing data to meet NACEP standards. Professor Carl commented that at the end of the term, instructors are required to distribute an "end-of-course survey." Carl further noted that teachers also evaluate courses by assessing "...student grades, sample work, sample papers." This data is used to evaluate student outcomes. The system informs academic leaders and teachers if any of the courses need to be changed based on the assessments. Carl noted that college administrators "aggregate" the data and provide each instructor with "feedback," noting areas of improvement, if applicable. Figure 7 on page 85 illustrates the increase in collaboration policies between 2010 and 2016.

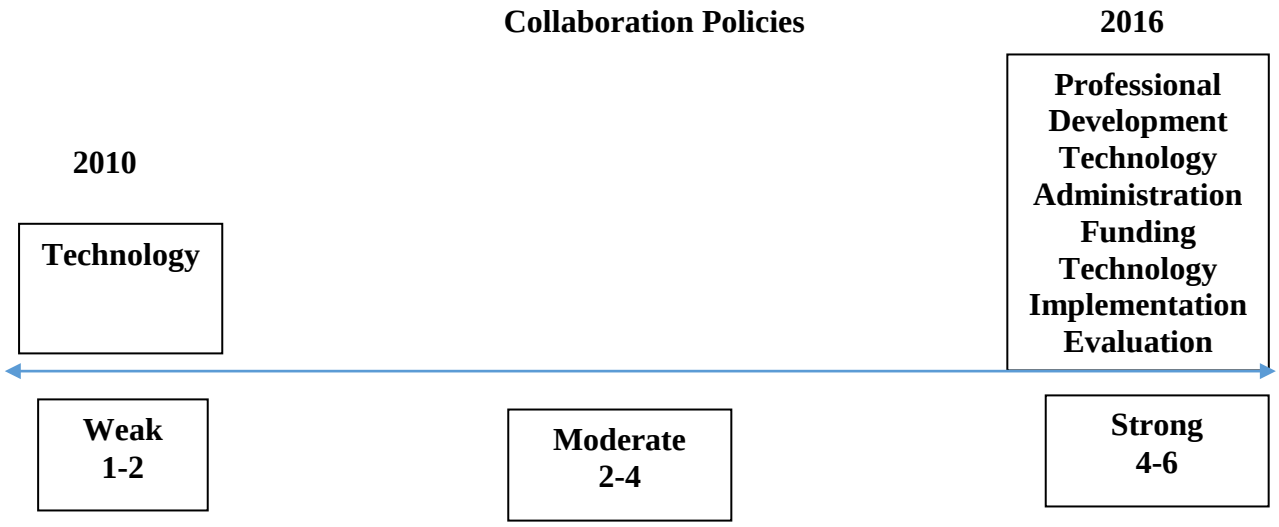

Figure 7: Collaboration Policies

In summary, six years ago the community college had policies in place related to technology; by 2016, academic leaders increased institutional support with additional polices related to professional development, administration, funding, implementation and evaluation policies increasing collaboration between academic leaders and instructors as well as earning NACEP accreditation. (See Figure X). Chapter 5 illustrated how these policies increased teacher participation within the college and between college and the Rocky Road School District.

4.8.3 Collaboration: Rolling Meadows University

In 2002, the university offered its first completely online course and has supported online learning since then with policies related to professional development, administration, technology, funding, implementation and evaluation processes. These policies are outlined through the collective bargaining agreement between the university and the instructors. The full extent of faculty participation is unknown; however, the decision to decentralize the online business model

a few years ago has increased the exchange of information and resources. For example, Sabina, the director of online learning, works closely with faculty members at the college, school and department levels to "cultivate" new online programs. Sabina noted how the university environment is very "collegial." She further explained, "We have a technology meeting every month and that brings in different people from the university." The curriculum process also increases collaboration, as Sabina further noted:

> I have oversight of the approval of curriculum… all of the online courses must go through our curriculum process and has to be approved to be taught online….

Sabina also attends the academic council's monthly meetings to provide progress reports. The council is made up of administrators, deans, and staff. Sabina commented further, "It's a wonderful vehicle… to get the word out on an initiative that you are doing..." Figure 8 below illustrates how collaboration policies remained the same between 2010 and 2016.

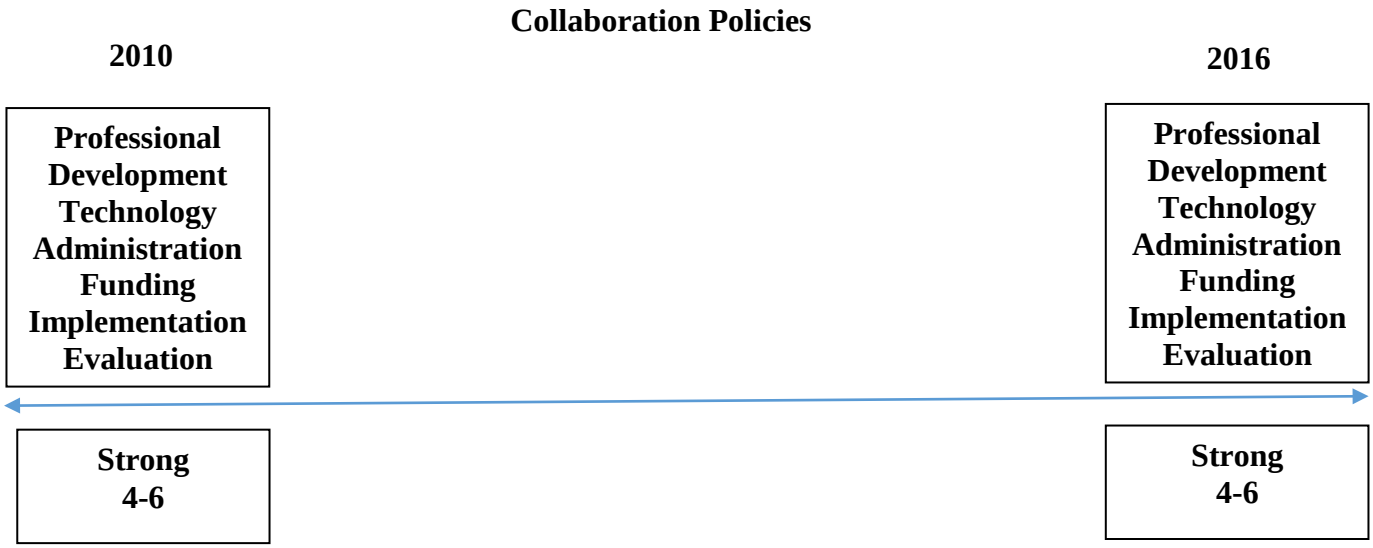

Figure 8: Collaboration Policies

In summary, The Rolling Meadows University has supported online learning for more than a decade with policies in place related to professional development, administration, technology, funding, implementation and evaluation processes. Chapter 5 discussed how these

policies have influenced teacher participation between the university and the Rocky Road School District.

4.8.4 Collaboration: Columbia St. Ann College

The Columbia St. Ann College provided instructors with minimal institutional support in the context of a BLN. It has policies in place related to technology and professional development, but has yet to adopt policies regarding administration, funding, implementation and evaluation processes. In this case, only two administrators agreed to participate in the study. Susan described blended learning as follows:

> …a mix of face-to-face classroom time and online work that they do on their own or with help from the professor or maybe a group thing on Skype or whatever but part of it is online and part of it is face-to-face...

Neither administrator could provide policy examples related to administration, funding, implementation and evaluation processes, or provide examples of professional development policies beyond the IT administrator providing "some training classes" related to blended learning. According to Susan, blended courses do not constitute the same requirements as an online course because of the "classroom contact" between the instructor and students. It's up to the faculty member to decide how to implement technology in the classroom. Figure 9 on page 88 illustrates how the collaboration policies remained the same between 2010 and 2016.

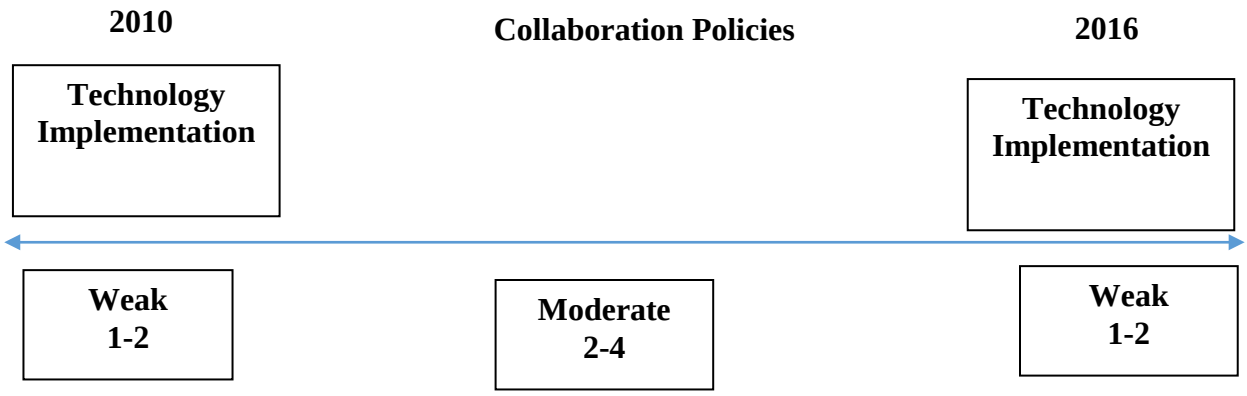

Figure 9: Collaboration Policies

In summary, it appears The Columbia St. Ann College has incorporated minimal polices to encourage collaboration between academic leaders and instructors in the context of creating a BLN. Chapter 5 discussed how this lack of policy influences teacher participation with Rocky Road School District.

4.9 RESEARCH QUESTION TWO

Research question 2: To what extent, did collaboration influence the school district's capacity to offer blended and online courses? When Rocky Road School District first launched the VLA, not one teacher in the district taught online. While teachers had been certified by the state to teach in the traditional classroom, they had not been trained to teach in a blended learning environment. Previous studies highlighted the importance of collaborative leadership for successful implementation of BL (Garrison & Vaughan, 2013; Murin & Watson, 2012), which may explain why teachers initially didn't teach in the VLA. According to Superintendent Robert, the previous administration had taken a traditional or top-down approach to management in

which the board went to the superintendent and the superintendent dictated everything down to the schools. Robert, however, took more of a team approach to management:

> We went from a traditionally structured management style to a site-based management style. I still make the final decision and the ultimate decision, but ideas and things get pushed out to a whole team to be taken back as well, so a lot of our initiatives have been driven from the bottom up.

The district's November 24, 2014 "Board Meeting Minutes" under the superintendent's report confirmed Robert's statement.

> The district's Community Site Base meeting will be held tomorrow (Nov. 25, 2014) and will be discussing the Virtual Academy (District Board Meeting Minutes, November 2014).

Moreover, the student and teacher contracts put in place implementation processes. For example, academic need drives teacher participation and begins with student referrals. Academic leaders at the building and district level provide administration support by reviewing all online course requests on a case-by-case basis, as Brittany explained:

> It really is individualized based on individual referrals. So, if it's a complex scenario, then it's a meeting. If it's something that is not as complex, then it can be an email. If it's a student that has multiple service providers involved or it's a complex academic case needing support, then we would pull the team together to discuss what is the best options for those students.... ultimately, looking at providing the best educational opportunities for kids. That's ultimately what it comes down to. The referrals come in the requests go out (for teachers to teach).

In summary, with new policies in place, a team approach, and student success, teacher participation increased the number of teachers, participating in the VLA, leading to curriculum changes and the listing of online courses in the course catalog. Chapter 5 discussed the influence of institutional support policies on teacher participation in more detail.

4.10 RESEARCH QUESTION 2-A

Research question 2-A: How did collaboration policies result in expanded learning opportunities for students in the district? The district's adoption of inter-institutional collaboration policies appears to have increased teacher participation, expanding educational opportunities internally and externally. Internally, once the teachers are trained, they start placing content online. Several teachers have placed their entire course online as an online option to students who can't attend the traditional classrooms for whatever reason, as Brittany explained:

> Some use the flip classroom scenario; others used it as a means to deal with frequent student absences and circumstances beyond our control like students who are out of the classroom for legitimate reasons...

Externally, the MOA between the school district and community college also increased teacher participation at both institutions. If it weren't for the "willingness" of the administrators and teachers, the program wouldn't exist, as Brittany further explained:

> We have several contact people in the college. We have a person who deals directly with the kids, so she's meeting with the kids every couple of months. We deal with the dean of the program through the college. We also deal with her administrative assistant and also

with their registrar to exchange that information. The staff here has gone above and beyond to make that happen.

As she further elaborated:

> The nice thing about that program is that we're putting kids in a college environment with support, unlike sending them to college, and now they're on their own.

4.11 RESEARCH QUESTION 2-B

Research question 2-B: How did collaboration policies influence student enrollment in the network? Multiple requests were emailed to academic leaders at Rocky Road School District for enrollment data related to the VLA; however, the requests went unanswered. While academic leaders and teachers answered follow-up questions, they did not provide enrollment data. According to a 2013 Pennsylvania Auditor General's report, the school district "lacks sufficient internal controls over its student record data." This may be one reason why the district wasn't forthcoming with student enrollment data related to the VLA ostensibly limiting the findings of this study. Table 15 on page 92 compares the success of the HEIs in expanding educational opportunities through their own networks. Chapter 5 however, highlights the district's success in expanding educational opportunities to students through interview data.

Table 15: Dual enrollment

Institution	Delivery	Formal Partnerships	Courses	Students	Cost
Rocky Road School District	BLN	1	Not Available	Not availabl e	Not available
Mountain Top Community College	BLN	54	300 sections	1,350	$58 - $203 per credit
Rolling Meadows University	Classroom	19	Not Available	Not Availabl e	Not Available
Columbia St. Ann College	Classroom	10	465	225	$100 - $200

4.12 FINAL ANALYSIS

This study examined the sustained support of academic leaders in implementing of inter-institutional collaboration policies between 2010 and 2016. The creation of the Rocky Road's BLN came about for a number of reasons. Initially, district leaders dedicated one-room to offer online courses to teen parents. After the passage of Act 88, with students leaving in "droves," as Principal John described, district leaders decided to build their own BLN, and increased institutional support for teachers. The majority of interviewees from the school district agreed that the financial stress of students leaving the district to attend charter schools played a major role in the school board's decision to create the network. As Brittany described:

> At the time, I don't honestly think they saw it becoming what it is now, but because of the students that had left the district and the financial burden it placed on the district, they decided: 'we have to do something…'

Subsequently, the creation of the network led to a number of institutional support polices in the areas of professional development, technology, administration, funding, implementation and evaluation processes. Figure 10 below illustrates the increase of institutional support policies within institutions.

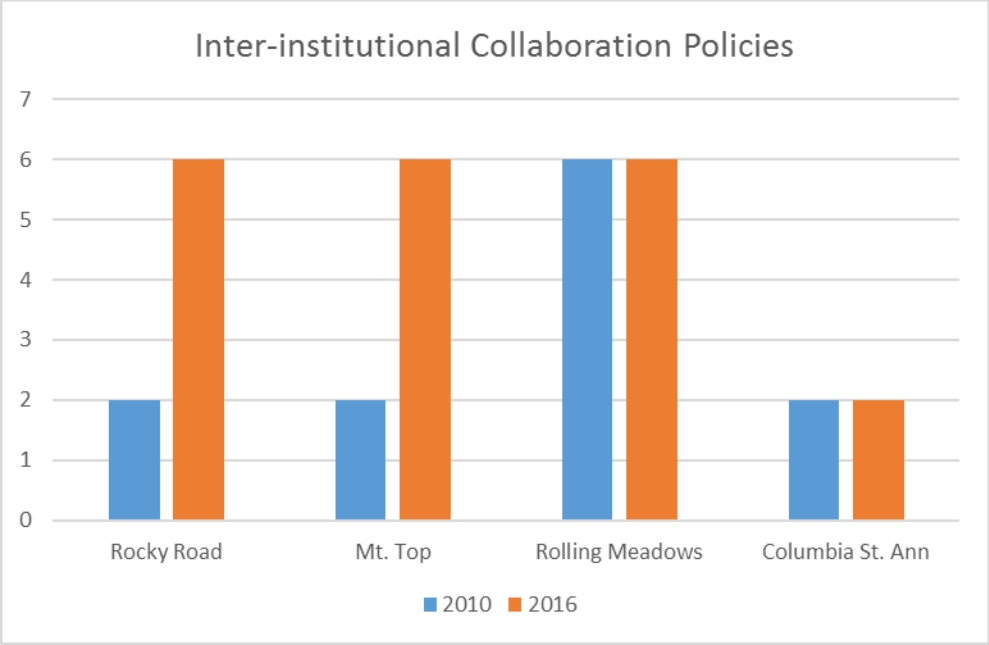

Figure 10: Inter-institutional collaboration policies (2010 – 2016)

In this case, all three public institutions (Rocky Road School District, Mountain Top Community College, and Rolling Meadows University), had implemented institutional support policies throughout their respective institutions. Columbia St. Ann had not. The implementation of these institutional support policies also led to increased teacher participation within all three public institutions.

In summary, Chapter 4 compared and contrasted the inter-institutional collaboration policies by education sector to identify the increase of institutional support over time. Finally, Chapter 4 examined the influence of collaboration polices on enrollment in the school district. The purpose of Chapter 5 is to discuss the major finding of the study and illustrate the influence

of inter-institutional collaboration policies on teacher participation within Rocky Road and among three HEIs in this case study.

5.0 DISCUSSION

The aim of this study was to examine the inter-institutional collaboration policies that support teachers in integrating traditional and virtual learning environments within and across education sectors. The literature was void of research that examined local level administrative policies to support blended learning within and among education institutions in rural locales. The research questions provided a framework to build evidence to prove or disprove the study's theoretical proposition:

> When implementing a BLN within and across education sectors, collaboration policy may be based on leaderships' sustained institutional support, increasing or decreasing with investments in teacher participation.

In this case, institutional support was defined by policies in the following areas: professional development, technology, funding, administration, implementation and evaluation processes.

5.1 POLICY PROBLEM: DECLINING ENROLLMENT

Declining high school populations across the Commonwealth of Pennsylvania are having adverse financial effects in secondary and post-secondary institutions. For example, in Pennsylvania by 2020, the elementary school-aged children population (ages 5 through 14) is

projected to decline by nearly 8 percent, while the high school population is projected to decline by 33 percent between 2010 and 2030 (Tucker, 2012). In this case, enrollment in the Rocky Road School District had decreased by 17 percent over the past 25 years (as seen in Figure 10 below) (Keystone Crossroads, 2016). Student enrollment also had a negative impact on Pennsylvania's state-owned universities and community colleges. In the 2016-17 academic year, the total enrollment for the 14-campus State System of Higher Education totaled 105,051 students, a loss of 2,075 students or 1.9 percent from Fall 2015 (Schackner, 2016). Enrollment at Rolling Meadows University has declined by 29 percent since 2010 (Schackner, 2016). Mountain Top Community College experienced a 16 percent decline in enrollment over the past three years (college's 2015-16 annual report, p.6). While enrollment numbers were not available for Columbia St. Ann College, in 2012, 80 percent of the college's enrollment was generated from Pennsylvania students. In addition, in 2011-12, cyber charters enrolled 32,205 students or 30.7 percent of all charter school students or 105,024 students in the state (Education Research & Policy Center, 2014).

Therefore, with declining enrollments and increased competition for high school students, due to population decline, Act 88, and other factors, it is reasonable to think that these conditions would create a more collaborative environment for secondary and post-secondary institutions to share scare resources as one strategy to sustain operations. The next section addressed the major findings of this study.

5.2 MAJOR FINDINGS

This study examined the sustained efforts of academic leaders in supporting teachers through the inter-institutional collaboration polices within and among secondary and post-secondary institutions. The study found the increase of inter-institutional collaboration policies over time influenced teacher participation within and between institutions. For example, the formal contract between the Rocky Road School District and Mountain Top Community College increased institutional support policies within and between institutions related to professional development, technology infrastructure, administrative support, implementation and evaluative processes. (See Figure 2, page 12). While teacher participation increased at Rolling Meadows University, teacher participation was unknown at the Columbia Ann College.

5.3 TEACHER PARTICIPATION

One way organizations have addressed management issues has been to establish agreements with other organizations as a pathway to share existing resources (Furtwengler et al., 1997; Sandfort & Milward, 2008). With declining high school populations across the state, and the school district losing students to cyber-charter schools, district leaders had to chart a different course. As a result, the district started to partner with public and private education institutions as well as online vendors.

In 2010, the school district had informal agreements with three institutions of higher education. These agreements allowed students with the financial ability and/or transportation to take enrichment courses online or at a nearby college. Principal John noted that, as internet

technologies evolved, academic leaders at the community college reached out to the school district to formalize relations and expand their own online learning networks. The agreement established policies both organizations needed in order to share existing resources, while remaining autonomous (Sandfort & Milward, 2008).

5.3.1 Rocky Road School District

This section discussed the influence of sustained institutional support on teacher participation within the school district. When Brittany took over as the head teacher more than six years ago, not one teacher taught in the VLA. The school district had adopted policies regarding funding and technology, but had yet to establish policies related to administrative support, professional development, implementation and evaluation processes.

The design of a BLN is a complex process, and it is imperative to have academic leaders and teachers with experience in blended learning for change to occur (Howley & Howley, 2008; Kolat, 2014; Staker & Horn, 2014). For example, in BL, the classroom changes from a teacher-centered method to a student-centered environment requiring a more systematic approach to train teachers (Powell et al., 2015; Werth et al., 2013). While professional development was identified as a barrier, it was also recognized as a factor for successful implementation (Horn & Staker, 2015; Kellerer et al, 2014; Murin & Watson, 2012; Werth et al., 2013). Moreover, Tucker (2007) survey of online teachers reported that 74 percent of teachers changed their teaching practices both online and in traditional classroom setting after teaching online courses.

In 2010, the school board hired Superintendent Robert, who had experience building an online charter school from the “ground up.” In this case, Robert had the board’s “buy-in from

day one," as well as that of parents who wanted "alternative" forms of education for their children. The teachers, however, were not as enthusiastic.

Superintendent Robert understood that BL was a different pedagogical approach to teaching and had every teacher in the district trained to teach and write online curriculum. The district received a three-year, federal/state school improvement grant the same year to provide "high-quality professional development" with "teacher and principal involvement" (Local newspaper, 2010). By the end of the training, teacher participation increased, even though stipends remained the same. Robert attributed the increase in teacher participation to the professional development teachers had received by showing them alternative forms of teaching and providing top-down support. As Superintendent Robert further explained:

> One of the largest components I think has to be the administration buy-in…. I think having that administrative buy-in shows the people that are making the network, which is Brittany and my principals, and some of the teachers that are teaching, it shows them that you are going to have support from the top…

Superintendent Robert estimated that 80 to 90 percent of teachers have adopted blended learning districtwide. Brittany has also experienced increased teacher participation over the past three years in the VLA. She estimated that 60 percent of all courses in the VLA are now taught by district teachers. (See Figure 11, page 100).

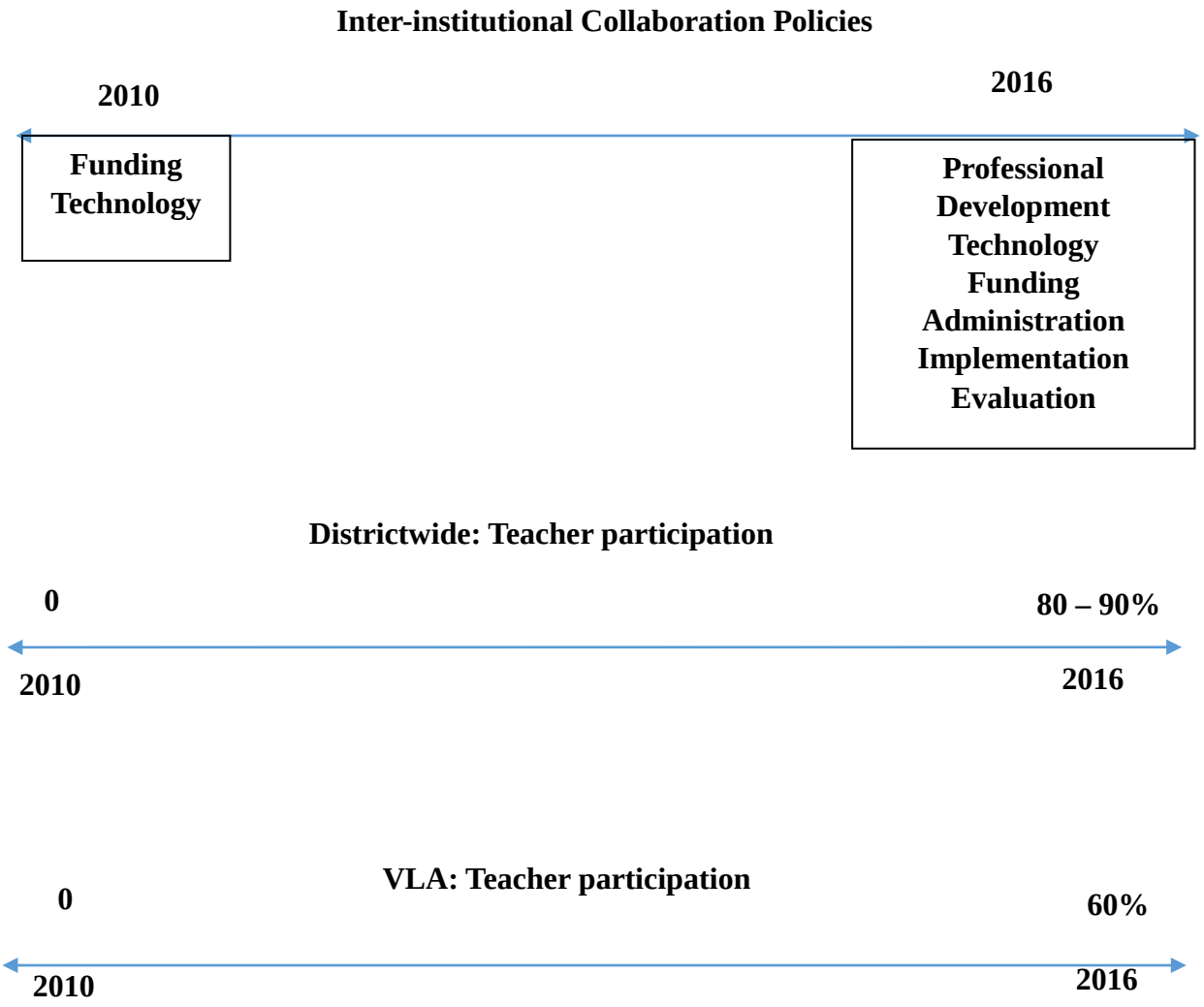

Figure 11: Inter-institutional collaboration policies

In summary, in 2010 only one teacher was teaching online courses in the district. By 2016, the district had adopted inter-institutional collaboration policies related to professional development, technology, funding, administration, implementation and evaluation processes. Moreover, as sustained institutional support increased, so did teacher participation. The next section examined the influence of inter-institutional collaboration policies on the external interactions of Rocky Road School District and the three HEIs.

5.4 TEACHER PARTICIPATION: HIGHER EDUCATION INSTITUTIONS

Researchers have described collaboration as a pathway by which organizations share existing resources, authority and rewards such as integrating staff, joint planning or joint budgeting (Sandfort & Milward, 2008). Researchers have also emphasized the importance of providing institutional support as a way to reduce barriers for instructors teaching in BL environment (Graham et al., 2013).

In 2010, the district had informal agreements with at least three higher education institutions (HEIs): a public university, Rolling Meadows University; a private college, Columbia St. Ann College, and a public college, Mountain Top Community College. Of the three agreements, teacher participation only increased in the case of the community college after academic leaders at both institutions signed an MOA. The next section examined the influence of institutional collaboration policies on the teacher participation between the Rocky Road and Mountain Top Community College.

5.4.1 Mountain Top Community College

In 2012, the school district formalized its agreement with the community college, offering students more, transferable general education courses. The agreement led to the adoption of new policies, increasing interactions between academic leaders and teachers at both institutions. The vice president of external relations, Holly, commented that this agreement led to additional policies as a direct result of a "great working relationship" between two administrators from both institutions. Holly also noted that these two leaders developed a "very specific plan" requiring "many trainings, question and answer sessions" between academic leaders and instructors from

both institutions. In the meetings, Holly explained that the administrators and instructors discussed the policies regarding credentialing, professional development, site visits and evaluation processes.

Under the Mountain Top agreement, school district teachers were not compensated for teaching community college courses. The contract required teachers to teach seven out of eight periods each day. The community college courses were "thrust" upon the teachers as Philip, a history teacher explained:

> We were basically told that you are contracted to teach seven periods out of the day, and you are going to teach this…and personally, I have had a little problem with the fact that we are not reimbursed because we are providing a service to [named removed] College, but we are not reimbursed monetarily for it…but I said ok if this is going to help kids… I said if I am going to do it, I am going to do it right… I took the time to basically build the curriculum; beef it up so it was a collegiate level course. When you help kids, it is rewarding… anybody that is in education doesn't look to make a pile of money.

In contrast, the previous agreement had only one policy requiring the community college to provide administrative support to district teachers. This may explain why only one school teacher in the district taught community college courses in 2010. In comparison, the college had only provided their instructors minimal institutional support with policies related to technology. This may also explain why only one instructor at the community college had participated in the program during the same time period. In contrast, under the 2012 MOA, new policies were established with Mountain Top Community College, providing institutional support in the form of professional development, technology infrastructure, administrative support, implementation and evaluation processes both internally and externally. For example, Rocky Road School

District teachers were required to complete their professional development activities each semester, and use the college's online portal to teach courses. The community college provided administrative support in the form of site visits. Teachers were also required to evaluate their classes and share the data with academic leaders from the college via the online portal. When teaching, community college faculty liaisons supported high school instructors by sharing best practices and course materials. Moreover, evaluation increased collaboration when teachers submitted examples of student papers to college administrators for assessment purposes. As Rock Road's history teacher Philip explained:

> I have to make sure I adhere to their curriculum. They do check to see that we are doing; what we are supposed to be doing. I had to black out students' names and mail; I believe it was Dr. [named removed] at the community college. I had to mail him an example of an A-paper, a C-paper, and a paper that was unsuccessful.

According to Philip, the college wants to ensure "the rigor and the relevance is the same," in the high school classroom as it is in the college's classroom. Furthermore, Holy noted that these policies increased the exchange of information and resources as academic leaders from both institutions worked together to build a highly structured curriculum map for students to enroll in "specific online courses at specific times" in order to satisfy degree requirements. Implementation required a high-level of coordination, as Holly described with: "lots of emails and phone calls along the way!" (See Figure 12, page 104).

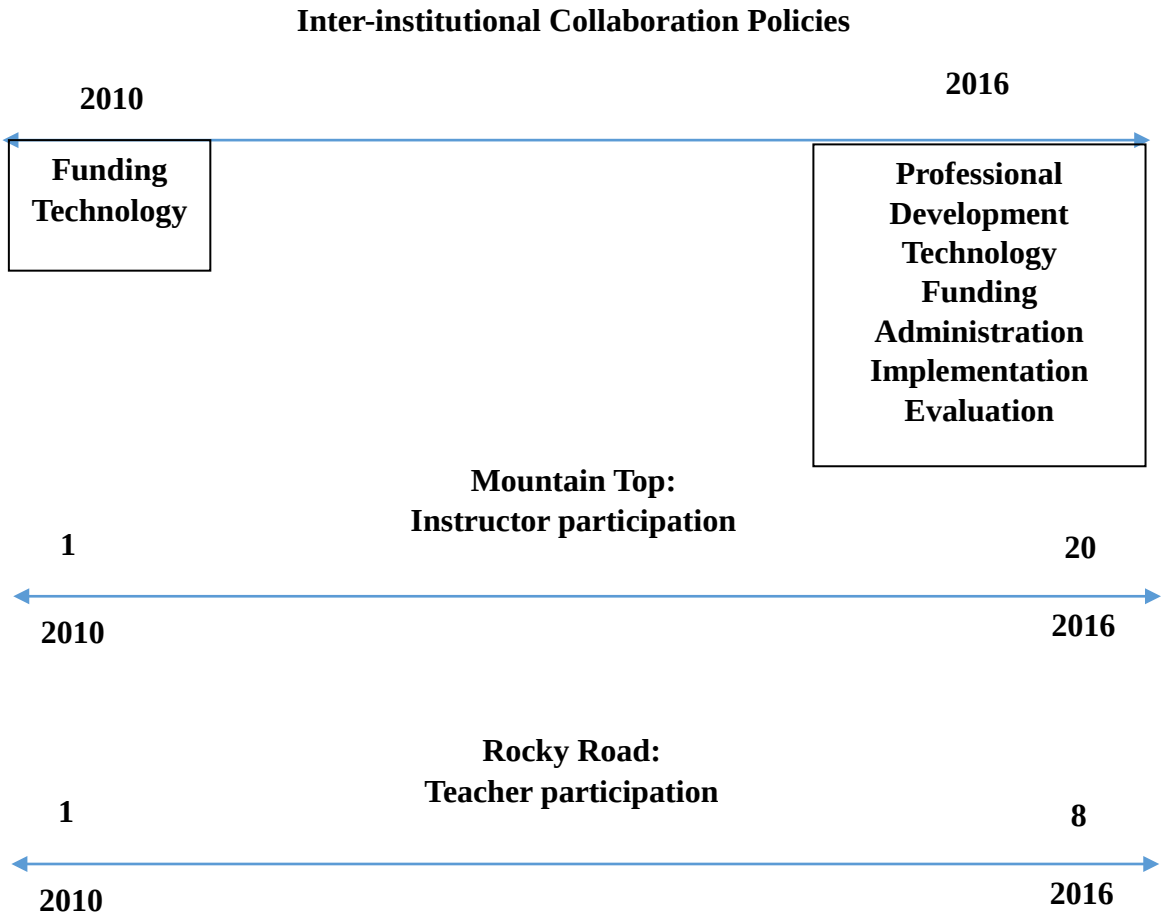

Figure 12: Inter-institutional collaboration policies

The next section examined the influence of institutional collaboration policies on teacher participation between the Rocky Road and Rolling Meadows University.

5.4.2 Rolling Meadows University

Under Rolling Meadow's agreement, the high school guidance counselor shared information with the students about the university's dual enrollment program and online options. However, the program was limited only to high-achieving students. For example, according to the university website, students taking online courses must meet the following criteria:

- Have a cumulative 3.0 QPA

- Submit results from the PSAT or SAT (95 or 950 critical reading and math) or results from the PSSA (advanced in one area)
- Obtain signatures from principal, guidance counselor, and parent
- Provide an official high school transcript

The criteria may be one reason among others that not one student had enrolled in the program over the past five years noted Rocky Road's guidance counselor, Michelle. Furthermore, the agreement did not establish policies outlining the sharing of resources between institutions, which may also explain why not one teacher from Rocky Road taught online courses at Rolling Meadows University. (See Figure 13, below). The next section discussed the influence of institutional support policies on teacher participation between Rocky Road School District and The Columbia St. Ann College.

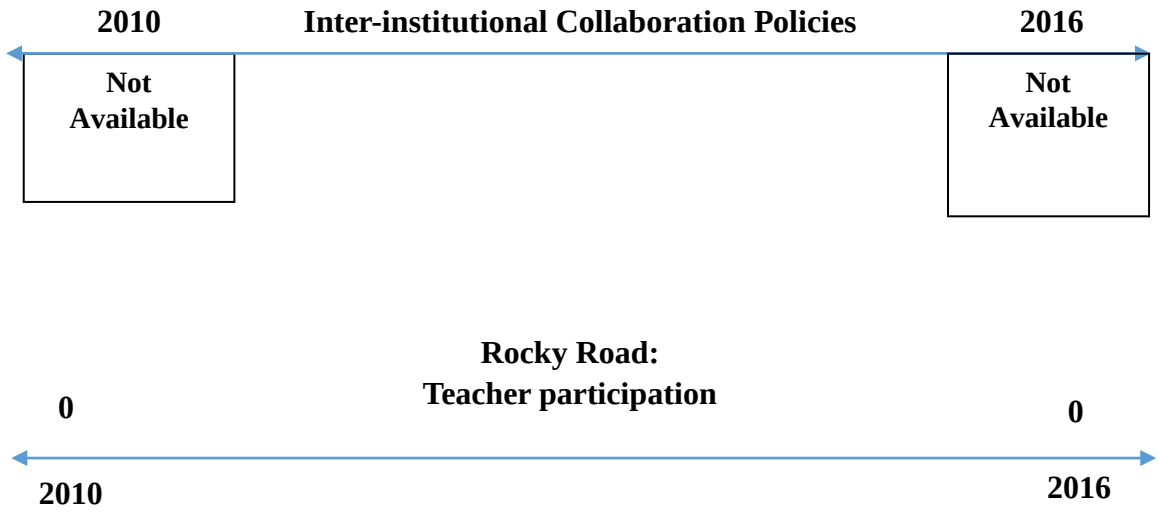

Figure 13: Inter-institutional collaboration policies

5.4.3 Columbia St. Ann College

In comparison, the agreement with Columbia St. Ann only allowed for minimal exchange of information within and between institutions. For example, the college provided a list of course offerings, while the school district established a policy allowing students to leave the district during normal school hours to take courses at Columbia St. Ann. The number of students attending the college is unknown; however, Columbia St. Ann had very few online options for high school students (See Figure 14, below). As Susan explained:

> …we are heavily 'brick and mortar' with only summer where we offer the most of our limited online courses. There is only two [online] during the academic year and most of our students are 'local'. If they want an online alternative that comes from the high school itself with an articulation with other schools.

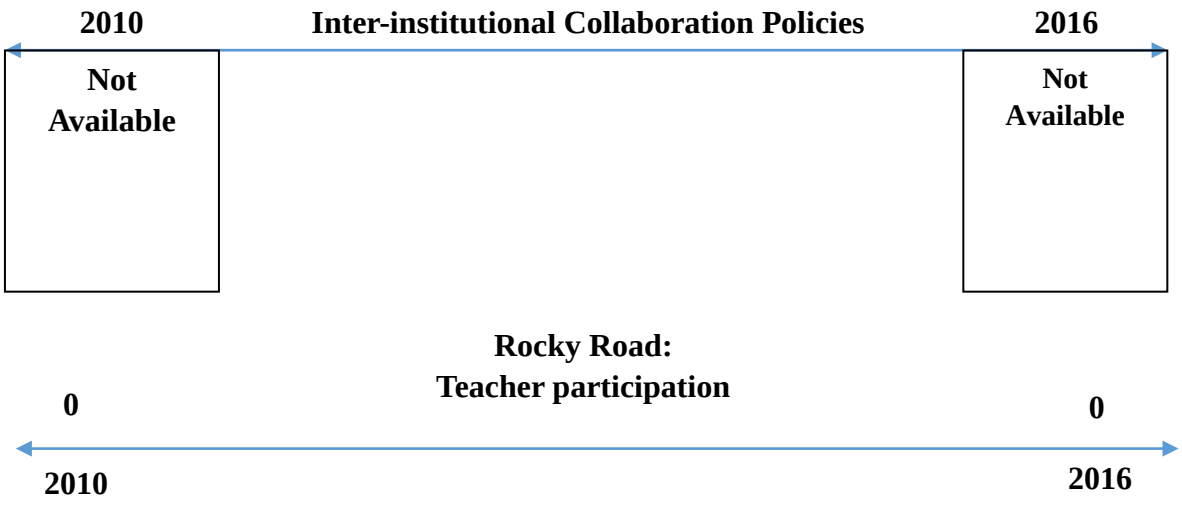

Figure 14: Inter-institutional collaboration polices

In summary, while an informal agreement existed for students to take courses at the college, the agreement did not call for the sharing of resources between the institutions, which may explain why teachers in Rocky Road did not teach online courses for the college. The next

section described the district's success in customizing learning opportunities for students, while using the network to manage costs.

5.5 SUCCESS: EXPANED LEARNING OPPORTUNTIES

The creation of the VLA expanded learning opportunities for students by offering remediation and/or enrichment courses beyond the traditional classroom. The network provided students with a choice of what they wanted to learn as Michelle explained:

> I think in a traditional classroom… students can sometimes be stagnant. We have certain courses we offer, but say for example, with [named removed] or courses online that we have available say for a student that wants to go into the medical field and they would love to take a course called medical terminology... We don't have that it in a classroom as a brick and mortar but they can take it online…. Say for example, we have a student who is interested in sports management—they have that online… so that student can meet with Mrs. [named removed] and set that up, so there are all of these possibilities of extending are education beyond the walls…

The cost of operating the BLN varied and depended on the demand for enrichment and/or remediation courses. Foreign language courses are the most expensive online courses the district offered, and cost $800 to $950 per student; however, the cost of hiring additional teachers outweighs the expense. For example, the average annual teacher salary is $47,268 plus benefits per year (Morning Call, 2015). The district has one Spanish teacher on staff, ostensibly limiting students' ability to learn other languages. As Brittany noted, "Some students will take German

other students may take Japanese, not everyone is meant to take just Spanish… that doesn't meet a student's needs…"

The network affords the district the ability to offer multiple language courses to meet the academic interests of students, saving potentially hundreds of thousands of dollars per year without hiring extra teachers, as Brittany elaborated:

> …. while now with online, I mean we've got German, Japanese, Chinese, Latin. Our foreign language population just skyrocketed. I mean there is a huge population of foreign language kids and those students, and those foreign language courses are very rigorous, and at the completion of a second year, they are ready for full emergence with no English, and they are fluent readers, speakers, writers. I mean that those online classes have been amazing for students.

With more teachers teaching online courses over the past four years, academic leaders discovered that they could offer courses at a lower cost than a third party vendor. It costs the district approximately $600 for an Algebra class through a third party vender. If a district teacher teaches the course, it costs about $375 per course. While the operational costs of the VLA have increased, it is still less expensive for the district to pay teachers a stipend above their annual salary to either prevent students from attending a charter school, as John explained:

> …if you look at what we're paying for say a cyber or charter school student, for them to educate that student, we're running this program on what we would pay for two or three or four special ed. cyber students which is huge. So if you're talking let's just say $50,000 to run this program for a year, let's just say, we would pay $14,400 for a special education student in a cyber-school per year.

While the district saves money from students not attending a charter school, there are also intangibles to customized learning opportunities for students. A few years ago a student had transferred into the district from the inner city. Brittany commented that the student had been expelled from his previous school on "weapons violations" and was a year behind academically. Academic leaders and teachers worked together, enrolling him in online courses, and providing one-on-one support. According to Brittany, he made up the year he lost in (another city), and graduated on time. He joined the military and enrolled in a public four-year university after completing basic training. Another advantage of the online program is its flexibility. The program allows teachers to modify or delete assignments as needed. Todd described how online courses afford students the opportunity to take courses at their "own pace." The network has also been beneficial for students with special needs, as Todd further explained:

> We have a lot of students with varying levels of ability. What I like about the program... I'm utilizing Audicyware; it's very customizable. With the flexibility of Audicyware I can add assignments or modify an assignment which is huge, delete assignments that I don't feel are really necessary and I can allow a student to work at their own pace which is nice. A lot of our students benefit greatly from extended time being afforded due to their disabilities whether it be reading or comprehension or… written expression. So the ability to modify an assignment for the given student is one of the big plus factors with this online programming.

The online courses have also been helpful in providing teachers with the flexibility of addressing cultural issues like teen pregnancy when "outside agencies," visit the school, as Todd further explained:

> I mean our school is not immune to the same kinds of problems many high schools are experiencing with teen pregnancies and what not so these councilors are coming from outside agencies are coming in and you [must] be able to coordinate with them. You know if you're in the middle of an online session and they pop in on a given day you [must] be able to say Okay we're [going to] stop here for now and that's another beautiful thing about the online program, it just picks up right where you leave off.

Moreover, the district's dual enrollment program provided "students with challenging and rigorous courses and that's what they need to be competitive at colleges whether it is two year or four-year college or an apprenticeship program," as Michelle said. There are many "positives" about the "individual education" students receive through the VLA, as Michelle further explained:

> …can you imagine ok, a student going to a four-year university; they have their associates degree; a lot of those Gen Ed. credits… that student is not have to go through…and they will be able to jump start or maybe they will go for four additional years in college, but maybe they will be able to have a major and a minor or a major and two minors, just think how it's going to broaden that student's future and education and also scholarships… A student that has an associate's degree and has all of these college courses under their belt and they are competing for scholarships… our students are going to shine.

For example, prior to the district implementing inter-institutional collaboration policies not one student had earned an associate's degree while in high school. After the district formalized its agreement with the community college and implemented new policies, eight students graduated in June of 2016 from high school with their associate's degree from the

community college. Figure 15 below illustrates the students leaving the district from 2010 through 2016.

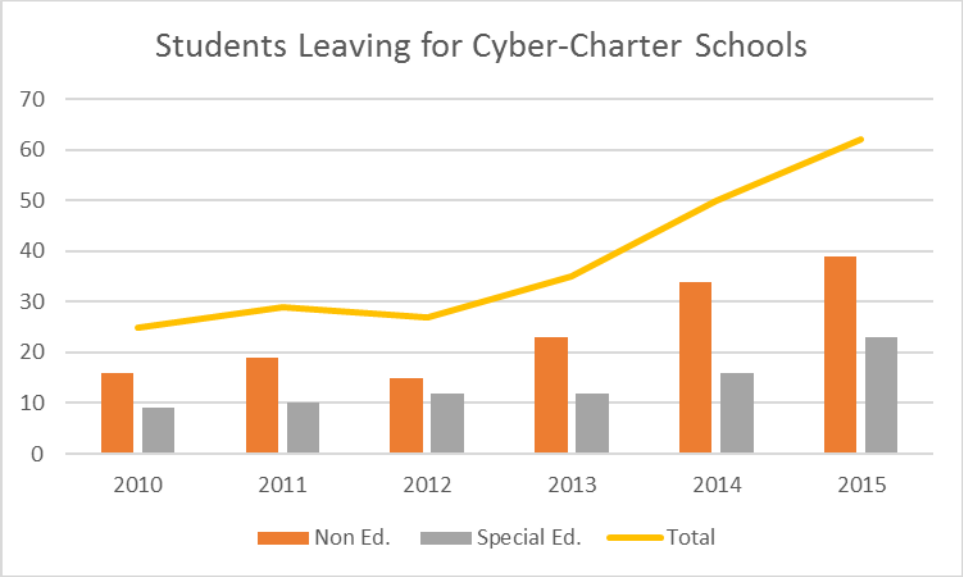

Figure 15: Rocky Road School District Cyber-Charter Enrollment

However, the financial success of the program is in question as students continue to leave the district. When Superintendent Robert started six years ago, approximately 40 students left the district; however, nearly "half came back" saving the district approximately "$100,000 or a little more…" However according to Robert:

> This year it's been like a roller coaster, and we have more going back out but it's when the students get upset with the teachers, when they aren't happy, when they felt bullied, so it's been a roller coaster… but Brittany does her best trying to work with that team, guidance and principals to keep them here….

Robert also noted how the "validity of the program" may also be in jeopardy as some students and parents are using the "cyber charter" option as a "crutch... knowing we are going to bend over to try to do whatever we can do to try to keep them here." As Robert further explained:

> That is becoming a bigger obstacle than I ever expected. I have had students threaten that if you don't do this 'I am going to a charter school... to change classes and go home and not come to school… looking at attendance problems…. They are getting to play the system.

Despite the challenges, the superintendent remains committed to the network. As Robert noted, "If we don't educate them, somebody else is going to, and if I can't give them what they want, they are going to go somewhere else to get it..." The following section discusses the implications for changes in policy at state and local levels.

5.6 POLICY IMPLICATIONS

Declining enrollments threaten the financial viability of many rural school districts as younger population's leave these hamlets, leaving older populations on fixed incomes to support those left behind (McClure, 2015). Clearly, teacher participation is critical to launching BL initiatives and requires institutional support within and between organizations. Research suggests that the districts most likely to implement BL are the ones losing students to other schools (Murin & Watson, 2012). Other studies suggested that legislators develop policies to permit and encourage collaboration between schools, especially for rural districts that cannot afford to start their own online programs (Kolat, 2014; Murin & Watson, 2012). The next section discussed the implications for policy changes at the state and local levels in the context of building BLN within and between public institutions.

5.6.1 Rocky Road School District

The creation of Rocky Road's BLN required changes in policies, as well as major investments in time and, financial and human resources. Institutional support required a sustained leadership and collaboration between academic leaders and instructors for success to occur. Robert noted how the VLA has grown substantially by "50 percent" each year for the past three years. The financial return on investment for the district is unknown, but what is known is that, the board is not reinvesting the monies saved back into the network. Instead, the board has opted to return monies saved back into the general fund to pay for other expenditures. For collaboration to continue, board members need to continue to support the network by reinvesting monies saved back into the program. State legislatures should also consider developing policies to encourage collaboration instead of competition between rural school districts and charter schools or to financially incentivize school districts to build their own in-house online charter schools.

5.6.2 Mountain Top Community College

Mountain Top's network shows great promise to become a state-wide exemplar in expanding learning opportunities to youth, living in financially strapped rural districts. For example, the thought of attending college is not at the top of mind for many high school students living in some rural Pennsylvania communities, as President James explained, "It's a change of mind, a change of culture something they may have never thought about before." The dual enrollment program becomes "very important" in opening the minds of rural students, "because we don't have the highest college going rate," in the region, as President James said. The network's

expansion of the dual enrollment program has paid dividends in providing access noted by a more than 300 percent increase in enrollment in the program since 2004. As James further noted:

> We are starting to see students probably whose families never sent anybody to college before now thinking college is a viable option for them in terms of career and career goals.

The college's online network has been instrumental in the "growth of the program," and "extends much further out" in areas not geographical accessible to many rural school districts, explained James: "We have definitely worked to build a good network." However, the sustainability of the program is dependent upon school district participation, teaching credentials, and the capacity of the college to continue to maintain the network financially. Since 2008, state and local financial support for the community college has dwindled (PDE). If such circumstances continue, academic leaders may have to make some very tough decisions to limit expansion to some very needy rural school districts. In this case, due to the program's "scalability," it would be incumbent upon state legislators to understand and support the duplication of this model at other community colleges throughout the Commonwealth.

5.6.3 Rolling Meadows University

With a four-year college graduation rate of 31 percent (US News & World Report), and declining enrollments, it may be incumbent upon university leaders to chart a new path. In general, it appears as if the BLN at Rolling Meadows University is more focused on bringing students to campus through its dual enrollment program for academically eligible students. This policy presents a possible challenge for rural students, requiring personal transportation to attend classes after school as well as the academic support they may need at home. It would appear

incumbent upon state legislators to make enrichment and remediation courses more available to rural school districts through a BLN similar to the Mountain Top Community College model as a way to strengthen the academic pipeline.

5.6.4 Columbia St. Ann College

Like the university, Columbia St. Ann College doesn't appear to use technology to expand learning opportunities to students in rural school districts. With an endowment of $95 million, and a faculty population less focused on online learning, Columbia St. Ann focuses its efforts on bringing students to campus possibly limiting access to the lower-income students in the area. While the college's network has experienced some success, the lack of online options for rural schools limits educational opportunities to those with the financial and transportation means to travel to campus.

5.7 LIMITATIONS OF THE STUDY

The nature of qualitative research inhibited the inquiry, limiting the findings to this specific case. This study only examined the agreements the district had with three HEIs and not the private online vendors. Requests for additional interviews with academic leaders and teachers at Rolling Meadows University and Columbia St. Ann College were not fulfilled. Furthermore, previous research in rural areas is limited, especially as it relates to inter-institutional collaboration polices. Moreover, this study was limited to the perceptions of academic leaders and teachers in the district and did not include the perceptions of students, parents, board members and local

legislators. Lastly, many requests for additional data went unanswered by participants at all four institutions.

5.8 IMPLICATIONS FOR FUTURE RESEARCH

In summary, Murin & Watson (2012) recognized the need for an internal champion to drive the implementation process. This study suggests that administrative leadership is instrumental in implementing institutional collaboration policies, requiring future research to understand the role and responsibilities of sustained leadership.

Moreover, even though the school district had implemented policies expanding online learning opportunities, students continued to leave the district. The natural question that arises, if students have a choice of classroom delivery, (i.e., BL and online), why are they leaving the school district to attend cyber-charter school? Future research may also study the financial impact of Act 88 on rural school districts in creating their own in-house, BLNs. In this case, administrators and teachers believed ACT 88 had a negative impact on the district, as chemistry teacher Mike wrote:

> The two major driving forces behind our development of a virtual academy were to provide students with additional means for being successful in school and to combat the exodus to charter and cyber schools. Some students function better in a non-traditional classroom setting, working at a pace they set. The virtual academy provided that opportunity. And, frankly, charter schools are a significant financial burden on the local school district. By creating a local option, we could lessen the financial impact of charter/cyber school options.

Other research questions may explore the number of BLNs in Pennsylvania, as well as the common attributes within and among these networks. Future studies may also examine the need for formal agreements to obtain institutional buy-in. Additionally, other studies may examine the cost and success of students taking online classes through the district's relationships with private vendors. Lastly, another study may examine the influence of BLN in meeting the education needs of students with disabilities.

5.9 CONCLUSION

Declining enrollments will continue to contribute to the political, demographic and financial limitations of rural public school districts in Pennsylvania for decades to come.

With fewer students, and limited resources across larger distances, it would be incumbent upon legislators, and academic leaders to collaborate with resource strapped rural school districts. Numerous reports demonstrate the financial consequences of declining enrollments in secondary and post-secondary institutions across the state with the potential closures of several public universities, including Rolling Meadows University. Moreover, a 2015 report generated by Pennsylvania's State Board of Education Council of Higher Education highlighted the challenges of the state's community colleges. The report cited two primary challenges: declining high school population and increased competition from all sectors of higher education among others (Report, p. 6). Among the recommendations to address these challenges, one suggested that community colleges strengthen their relationships with the school districts in their area (Report, p. 6). The report mentioned the success of Mountain Top Community College's efforts

to provide college-level coursework taught by approved high school faculty in its partner high schools (Report, p.16).

In this case, inter-institutional collaboration policies showed great promise to enhance the level of collaboration within and between institutions when a formal agreement is in place. Implementation requires buy-in at all levels of the institutions, and it begins with administrators identifying and addressing the objectives of all stakeholders within the context and culture of the organization (Carbonell, 2013; Porter et al. 2014). For example, Superintendent Robert advised other academic leaders contemplating building a BLN to go "slow" and examine "all the needs of their own district." As he further elaborated:

> Don't buy a canned program. Look at what you are truly needing in your district; what your students need; what your teachers need; and what your administrators need; but look at those needs and then create a program and a model that works best for you… I would work on getting the boards to make sure that is a mission and vision that they want to do and also then sell it to the staff and get their buy in.

Who benefits from a BLN? Everyone related to the network benefits—students, teachers, administrators, board members and the community. Students who need to make up coursework, for whatever reason, are able to graduate on time by taking remediation courses. Students wanting to matriculate to a post-secondary institution can better prepare by taking enrichment courses. Teachers are able to enhance their teaching abilities and meet students were they are academically. Administrators and board members are better equipped to manage scarce institutional resources. The community benefits by preparing students for careers or college without further straining the local tax base, or, as one academic leader said, it "…keeps the money in house." Moreover, education policies in the early part of twentieth century focused on

the consolidation of rural schools (Cubberley, 1920). Perhaps with internet technologies of the twenty-first century, it would behoove academic leaders and legislators to focus on collaboration instead. In conclusion, the policies required to create a BLN takes time to implement. In this case, it has evolved over the years from one-room with a handful of computers to a network of educational opportunities for students and teachers. As Brittany described, “We have a large population. We have a large network. We have teachers and administrators on board, but that doesn’t happen overnight.”

APPENDIX A

SCHOOL DISTRICT ADMINISTRATOR: SAMPLE INTERIVEW QUESTIONS

1. Tell me about yourself, and your position in this school district?
2. Tell me, why did the school district decide to collaborate with higher education institutions in offering BL courses? (Prompt: Blended Learning Network)
3. From your point of view, did these partnerships influence or require policy changes in the district? If so, how? (Prompt: Examples)
4. I realize there are different ways of thinking about "blended learning", so could you tell me what it means to you?
5. How would you describe your responsibilities per the agreements?
    a. From your point of view, how do these agreements differ from each other? (Prompt: Benefits and Resources/private vs. public)
    b. How does the district determine the resources needed to fulfill or maintain these agreements? (Prompt: professional development, technology, administrative, funding, implementation, evaluation)
    c. How has the district communicated the agreements to the teachers?
    d. How have teachers responded to BLN? (Prompt: Participation/Feedback)

6. From your point of view, is there a difference between teaching in a BL environment and a traditional classroom, why or why not? (Prompt: have you ever taught BL courses?)
    a. From your point of view, how does the school district support teachers in BLN (Prompts: professional development, technology, administrative funding, implementation, evaluation, technology, policies)?
    b. Could you describe how the district prepares teachers to teach in a BLN?
7. How would you describe your responsibilities as it relates to the BLN? (Maintaining and fulfilling these agreements)?
    a. From your point of view, what resources do you need to meet your obligations?
    b. Could you describe how the district supports your efforts in the network?
    c. Would you describe what you perceive as obstacles in fulfilling your obligations, and the type of issues that may hindered your ability to succeed?
    d. How did you address or manage them?
8. How would you describe your interactions with the teachers in this network (Prompt: meetings or communicate on a regular basis)?
9. From your point of view, what outcomes were you hoping to achieve? How did you measure those outcomes? (Prompt: is the program successful)
10. Is there anything you would change at this point in the agreements or the network?
11. What would you recommend to others who are considering similar agreements or networks?

APPENDIX B

TEACHER/FACULTY: SAMPLE INTERVIEW QUESTIONS

1. Tell me about yourself, and your position in this school district?
2. Tell me, why did the school district decide to collaborate with higher education institutions in offering BL courses? (Prompt: Blended Learning Network)
3. From your point of view, did these partnerships influence or require policy changes in the district? If so, how? (Prompt: Examples)
4. I realize there are different ways of thinking about blended learning, so could you tell me what it means to you? (Prompt: Courses taught/years' experience).
5. From your point of view, is there a difference in teaching in the traditional classroom and a blended learning environment why or why not?
    a. Does BL require more resources than the traditional classroom? If so, how and why?
6. From your point of view, how would you describe your responsibilities in a BL classroom compared to the traditional classroom? (Prompt: teacher agreements; student and administrator interactions; professional development, technology, administrative, funding, implementation, evaluation)

a. How have academic leaders supported your efforts in a BL classroom? (Prompt: communicated responsibilities or shared information)
b. How would you describe your responsibilities in a BL environment? (Prompt: Compared to the traditional classroom; professional development, technology, administrative, funding, implementation, evaluation)
c. What factors do you believe contribute to you fulfilling your obligations?
d. Could you describe the differences in the resources needed to teach in a BL compared to the traditional classroom, why or why not?
e. From your point of view, how does the school district support teachers in BLN? (Prompt: professional development, technology, administrative, funding, implementation, evaluation)

7. Would you describe what you perceive as obstacles in fulfilling your obligations in the BL classroom?
    a. How do you address or manage them?
8. How would you describe your interactions with academic leaders or administrators in the network? (Prompt: professional development, technology, administrative, funding, implementation, evaluation)
9. Could you describe your reasons for participating in the network?
10. From your point of view, what outcomes were you hoping to achieve? How did you measure those outcomes? (Prompt: is the program successful)
11. Is there anything you would change about the network?
12. What would you recommend to others who are considering teaching BL courses

APPENDIX C

HIGHER EDUCATION ADMINISTRATOR: SAMPLE INTERVIEW QUESTIONS

1. Tell me about yourself, and your position?
2. From your point of view, why did this institution decide to collaborate with a public K-12 school district? (Prompt: do you have similar relationships with other districts).
3. Did these new partnerships/relationships influence or require policy changes? If so, how? (Prompt: Examples)
4. From your point of view, is it important to offer college-level, blended and online learning courses to high school students, why or why not?
    a. How has the institution communicated and responsibilities of BL to the faculty? (Prompt: Faculty agreements)
5. From your point of view, is BL different from the traditional classroom, why or why not?
6. From your point of view, how does the university/college support you in fulfilling your obligations to collaborate with a rural school district? (Prompt: professional development, technology, administrative, funding, implementation, evaluation)
    a. Could you describe your responsibilities as it relates to the BL agreements?

How have you fulfilled your obligations and what are the factors that helped you to succeed? (Prompt: issues that may have hindered success)

7. How have faculty responded to collaborating with a rural school district?
    a. How has the university/college supported faculty in network? (Prompt: professional development, technology, administrative, funding, implementation, evaluation)
    b. Does this environment require more resources than the traditional classroom, why or why not?
8. Could you describe your responsibilities in the network? (Prompt: compared to traditional classroom: professional development, technology, administrative, funding, implementation, evaluation)
    a. From your point of view, what obstacles do you face, and if so, how did you address these challenges? (Prompt: describe success and factors related to success)
9. From your point of view, what outcomes were you hoping to achieve?
    a. How did you measure those outcomes? (Prompt: is the program successful? Why? Why not?)
10. Is there anything you would change at this point if you were doing it all over again?
11. What would you recommend to others who are considering collaborating with a rural school district?

APPENDIX D

INSTITUTIONAL REVIEW BOARD

To: Harold Aughton

From: IRB Office

Date: 6/17/2015

IRB#: PRO15050217

Subject: Inter-institutional Collaboration Polices: Building a Blended Learning Network

The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section 45 CFR 46.101(b)(1).

Please note the following information:

- Investigators should consult with the IRB whenever questions arise about whether planned changes to an exempt study might alter the exempt status. Use the "Send Comments to IRB Staff" link displayed on study workspace to request a review to ensure it continues to meet the exempt category.
- It is important to close your study when finished by using the "Study Completed" link displayed on the study workspace.

- Exempt studies will be archived after 3 years unless you choose to extend the study. If your study is archived, you can continue conducting research activities as the IRB has made the determination that your project met one of the required exempt categories. The only caveat is that no changes can be made to the application. If a change is needed, you will need to submit a NEW Exempt application.

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office

APPENDIX E

CONSENT SCRIPT

Name of researcher: Harold Aughton

Address: 308 Dana Court, Gibsonia PA 15044

Telephone: Day: 412-648-7598

E-mail address: haa25@pitt.edu

This form outlines the purpose of this research project and provides a description of your involvement and rights as a participant. For that reason, I will be conducting a case study with the goal to better understand and describe how secondary and post-secondary institutions developed, implemented and evaluated a blended learning network. I will conduct face-to-face and phone interviews with academic leaders and instructors associated with the network. If you are willing to participate in the interview, I will ask questions about your background (e.g., age, race, schools attended, years of education) as well as your thoughts about yourself and others in the network. Participants will not be compensated for taking part in this research project. The interviews will be audio-recorded. Participants will be contacted three to four times in total. The first contact will be made via email to request an interview. Subsequent emails will ask

participants to review the interview, and make any corrections or revisions. The final email will include a copy of the final report. Responses will be kept confidential and will be stored under lock and key at the University of Pittsburgh, 230 South Bouquet St., Pittsburgh, PA 15260, in the primary investigator's office. Your participation is voluntary, and you may withdraw from this project at any time. This research study is being conducted by Harold Aughton, who can be reached at 412-648-7598, if you have questions.

APPENDIX F

Table 16: Institutional Support: Professional Development

Category: Professional Development		
Institution	Interviewee	Quote
Rocky Road School District	Robert	We have a lot of teachers that go to P&C which is the technology conference; that is in Hershey. They go there to bring technology ideas back and look at blended learning, so that allows teachers to drive their own professional development.
Rocky Road School District	John	...constantly offering professional development opportunities.
Rocky Road School District	Brittany	we also had a grant which (named removed can talk more about… which trained all of the teachers online learning; taught them how to teach online; how to create online content; so all of the teachers had training in online learning and teaching…
Rocky Road School District	Michelle	
Rocky Road School District	Mike	And, I think my principal and (name removed), the IT guy, are kind of excited to offer opportunities for training in the use of some of these tools we have. I really think that once people found out it's not all that hard.
Rocky Road School District	Philip	I did have to go through and I went through and multiple Blended Schools trainings in order to build that Blended Schools course that the kids get on down in (named removed) room.
Rocky Road School District	Todd	We've had formal trainings from their representatives come to the school; usually it's a summertime orientation kind of thing like a full day maybe a full two days and even sometimes up to three days depending on how extensive the training is. The school district does provide onsite trainings.
Mountain Top Community College	James	We use the online environment to train so they all don't have to … we do offer a training a couple of times a year …faculty from the high schools come to us…for training but not all of them can make it so… we put it into the online network so that training can be done and accomplished… this is how we were able to get the NACEP accreditation…for our program because we do offer a very good system of training for the faculty that teach for us…

Table 16 (continued)

Mountain Top Community College	Fred	. . . due to time and costs for learning management system, related software, professional development, & help desk support. A higher level of collaboration between faculty and administration is required since many individuals have not had prior experience teaching (or learning) on-line and working with the LMS.
Mountain Top Community College	Holly	The week before classes start, there are all kinds of professional development activities occurring for adjunct and full-time faculty.
Mountain Top Community College	Carl	…and then we phased in a professional development… if you can't make it face to face you are going to do it via technology
Mountain Top Community College	Sarah	We provide professional development opportunities to all of our ACE faculty – we have to through our NACEP accreditation…. We provide them with the annual online discipline – online --- and if they can't attend, we do hold an on-campus professional development every fall…but we partner with 54 different high schools…. some are close to the New York border so it is not always possible for them to come here in an evening so we do provide professional development online for them as well as all of our new ACE faculty… we provide them with additional professional development…
Rolling Meadows University	Sabina	...mandatory 5-week instruction course that the faculty must take before they teach an online course...
Columbia St. Ann College	Julie	
Columbia St. Ann College	Susan	...so she does some training on it…but then she meets one on one when they are down to a specific course…

APPENDIX G

Table 17: Institutional Support: Technology

Category: Technology		
Institution	Interviewee	Quote
Rocky Road School District	Robert	And I know we at one point were one of the largest areas for computers and technology in our intermediate unit so looking at that putting our money where our mouth is for technology...
Rocky Road School District	John	...but technology is so prevalent now in a regular social studies or a regular math or science class that it's, it's starting to balance out… a few years ago, several years ago, I would have said that the technology is more prevalent in the virtual lab but now almost every one of our classrooms has their own computer cart…IPod or IPad cart and they share with one another and I would bet if we would walk down the hall right now that 8 out of every 10 classes would have some sort of technology device working at that period…
Rocky Road School District	Brittany	Technology changes quickly, and as you are buying services from another technology provider, we have to meet their technology requirements. So, making sure our equipment meets the requirements for what those systems need to run on, sometimes we're playing catch up. But that's never gotten in the way of the services to the students or the teachers. Someone has to be available to answer questions or solve those problems when they happen. When a computer doesn't work or the students have a problem, they have to have someone they can reach out to. And you might not get a solution right now, but its someone who will find out what that solution is and make sure it gets put into place so that it resolves the issue. Our technology department has been a huge asset in problem solving things.
Rocky Road School District	Michelle	

Table 17 (continued)

Rocky Road School District	Mike	Just as an example, I use an Office 365 tool for lab purposes. They got me a Surface Pro tablet -the greatest technology they ever gave me- but there's one computer cart shared between four science teachers. My department could not embrace that as a whole. There are limitations in the overall picture but I can't complain for how they support me individually. Its due a little bit to funding but I think it's due a lot to where our school district would follow the priority set by the state and the states priorities are primarily algebra, math with a secondary emphasis on literature and reading while a distant third is science and biology. We have technology tools for math, first; English, second; and science has never made it. They cut the Classrooms of the Future funding after two years and we were to receive our technology in year three. So, we never got it.
Rocky Road School District	Philip	Yes… but we still send them off to universities where there is a gap…there is a whole different set of research there …but we are bridging that gap by providing that old school traditional with new gadget technology stuff…
Rocky Road School District	Todd	I think we are and we are doing a pretty good job of it. I know this superintendent that we're working under right now is pretty big on the use of technology in general and is not opposed at all to online programming.
Mountain Top Community College	James	
Mountain Top Community College	Fred	For instance, faculty teaching online need to work closely with IT administrators to ensure that there is appropriate technology in place to meet their learning objectives online. This might entail IT administrators purchasing additional tools or software to support certain classes/programs. As new tools are brought online IT administrators will need to get faculty feedback to ensure that new tools are properly implemented. For their part, faculty will need to make IT administrators aware of the online tools they use in their classes so IT can provide appropriate technical support to students. Faculty and administrators will need to be in regular communication regarding the function of the college's online course system.
Mountain Top Community College	Holly	As it begins to grow, we had to create an online portal. So not only do we have this online blended network for our students…this is how we communicate with our 250 ACE faculty…. So we built this portal… this is our internal portal… give you an example…. Somebody wants to teach bio 1…. They are out here. They are at Rocky Road HS…. They simply click on this module…. And we had/have PowerPoint created…

Table 17 continued

Mountain Top Community College	Carl	Our portal… we have umm…. Those resources are critical to get out to my faculty members… in the business area for example the common assessments that we use in all of our classes and our grading rubric, and the materials from our professional development meetings… it's all out there for us… a matter of fact that's one of the things Holly and I presented on at a recent NACEP conference was leveraging that technology to provide professional development to folks that are at a distance from the college so we rely on technology in that sense.
Mountain Top Community College	Sarah	From 1996 until now…because in the realm of online learning…. To be in the game for over 15 years that is a long time…. So I am really proud of our progression… but we have a lot more work to do…. I tell you because technology never stops.
Rolling Meadows University	Sabina	
Columbia St. Ann College	Julie	
Columbia St. Ann College	Susan	I know they have something; don't ask me what they've got—technology is way out of my area...

APPENDIX H

Table 18: Institutional Support: Administration

Category: Administration		
Institution	Interviewee	Quote
Rocky Road School District	Robert	And I have had great people to work with to further seeds that I have sown… I think having that administrative buy-in shows the people that are making the network, which is Brittany and my principals, and some of the teachers that are teaching it shows them that you are going to have support from the top rather it's the board with money or it's me helping scheduling things like that…
Rocky Road School District	John	
Rocky Road School District	Brittany	The way it is structured here is that all the online courses come through the administrators and they have a say in what we're doing with these students. And they are aware of the online options available to students. Because we get their support with every referral we get, then the teachers take those classes, the teachers see that I believe as administrative support of what they're doing in their classes. (teachers feel support of admin) It's an automatic communication that everyone is involved with what is happening with the students.
Rocky Road School District	Michelle	I would say support at the top—a motivator, someone in administration… I think teachers who, who are talented – who would like to be able to teach a college course, who have the skill sets and ready to go and wants to do it…now you understand our teachers are not paid to teaching these college courses… I mean you know …their prep in their class, you know now, they have added this college but they don't get an extra planning period; they don't get paid …it's out of the goodness of their heart and support of the student body that they are doing it...
Rocky Road School District	Mike	

Table 18 (continued)

Rocky Road School District	Philip	I have administrative support in terms of….like Brittany, she helps me out with the blended schools stuff…umm as far as…the administration was supportive in me sending out the letter telling the parents: look this is a college course; it's rigorous. I mean I got John's approval to send that letter and have the parent's sign off; your kids are going to hear about this stuff…
Rocky Road School District	Todd	I think we have that, I mean, you can always improve on things in terms of administrative support but those guys, you know all those administrators are spread so thin with their time too because the demands on them are pretty extreme these days of education because we're always cutting back trying to save, save, save and a lot of times that means man power is cut back and more and more things get applied to less and less people...
Mountain Top Community College	James	
Mountain Top Community College	Fred	
Mountain Top Community College	Holly	I have an assistant director (administrative support) and these two lovely ladies (point to the women outside her door) now that I am down here… tremendous help and I have those 10 to 18, college faculty liaisons… I have two faculty coordinators….. I have a lot of help…. A lot of help…
Mountain Top Community College	Carl	...we have set up a model where faculty members have release time to serve as liaisons and go do the visits and work with folks so without strong administrative support, there is no possible way that we could pull this off….
Mountain Top Community College	Sarah	
Rolling Meadows University	Sabina	We have a learning technology center on the university…. Instructional designers, the manager of the system, umm, she works one-on-one, webinars, you name it…. working with them to help them do anything – soup to nuts… to help them build their classes.
Columbia St. Ann College	Julie	
Columbia St. Ann College	Susan	

APPENDIX I

Table 19: Institutional Support: Funding

Category: Funding		
Institution	Interviewee	Quote
Rocky Road School District	Robert	Any grant I think would fit our purpose… we have had SIG when I first got here… SIG is a school improvement grant… It was federally funded. It was through Race-to-the-Top, and what they did was…. We became a turnaround model. The principal became director of the secondary… and I became a principal…and director as well…so we looked at changing that… we looked at changing the processes with curriculum… that's why we went to blended learning… we looked at inculcating with technology that's how we got a lot of our technology… so we had that going at first… that was about $900,000 for three years… so then we got KTO which started out about $400,000. This year it's $700,000 and it's to push literacy through…
Rocky Road School District	John	so we receive some funding and we actually have a, and I won't get into details, but we have a significant sum of money that provides us money every year that was endowed to us back in 1989 so we are able to maintain current technology and probably above many schools are size...
Rocky Road School District	Brittany	This program started and we were buying the service from somebody else, which gave us the opportunity to see how it works, and then the district got a grant (SIC grant) that trained all the staff in blended learning. School district wide, all 200 teachers received training in blended learning that was one platform, so it was one facet of learning, and that's what opened up other avenues. One of things that we do in the summer is we break the courses up a little bit more, so it allows parents to pay a smaller amount and as they finish, they can go to the next piece, so we did do that to sort of help. We have also enabled the parents to make payments, so, we are a low income district – we realize that money is an issue, so we try to meet the individual needs.

Table 19 (continued)

Rocky Road School District	Michelle	
Rocky Road School District	Mike	
Rocky Road School District	Philip	
Rocky Road School District	Todd	Well I think first and foremost finances, that seems to be the almighty determining factor in many school systems you have the funding to continue these types of programs. The Audicyware package that we purchase is one of many that are afforded thorough the virtual academy here in our building
Mountain Top Community College	James	...in any given year… selling over 6,000 credits a year to these students…. A good percentage of those credits are sold on a highly discounted rate….because we are using high school faculty to deliver the courses and we… so we don't pay them so they are basically doing… they are adding our curriculum to their courses and working that through so…
Mountain Top Community College	Fred	
Mountain Top Community College	Holly	
Mountain Top Community College	Carl	so the college has made a major funding commitment to this too, because it generates revenue but as a teacher, more importantly, it provides educational opportunities to kids that may not have it…
Mountain Top Community College	Sarah	The funding for our program… students do pay for their credits…through the ACE program it's going to $58 a credit… right now it is $55 a credit… so they pay for those courses… through the associate in high school program… any ACE credit that they are taking…. They still get the $58 a credit but when they are taking the online courses or the courses on campus it is full tuition….
Rolling Meadows University	Sabina	It comes out of the revenue generated…. Like I said before, we were before a revenue generating center…. Which we collected some of the revenues directly from the classes…. We were also able to hire faculty to teach certain classes… about 4 or 5 years ago, we went to a RCM model (which stands for responsibility center management model) and what that did was push it out to the colleges… out to the deans, so now, the revenue goes to the colleges first, and then trickles down…

Table 19 (continued)

Columbia St. Ann College	Julie	
Columbia St. Ann College	Susan	(No separate line item in budget for blended learning) Not at this point because we are still developing more than fully running...

APPENDIX J

Table 20: Institutional Support: Implementation

Category: Implementation		
Institution	Interviewee	Quote
Rocky Road School District	Robert	We looked at changing the processes with curriculum that's why we went to blended learning. The hardest part with that is I would say is buy in because when I got here we had a high school principal that understood it but didn't want to leave the students go, umm, I still have an elementary principal: "I don't like online" and so very negative when it comes to Dawn and what she is doing… so buy-in I think is one of the things I have to monitor and make sure it's happening because it is a program that I want to have happen and getting them to use it. In the last four years I have seen a great change in our high school principal doing very, very well… We went from a traditionally structured management style to a site-base management style. I still make the final decision and the ultimate decision, but ideas and things get pushed out to a whole team to be taken back as well, so a lot of our initiatives have been driven from the bottom up. We have teachers, educators, para professionals, support staff, parents, board members, then I have a district council where I have community members and business owners, early childhood, adult literacy, so we have a lot of different people at a lot of different levels. I have elementary site base, middle school, secondary site base, and district site base. We have also started using a technology called IndaStar, which looks at sustained school improvement, and looks at indicators of success, so those teams work in conjunction with site-base committee teams…
Rocky Road School District	John	They teach it their own way, so they are getting the ideas and the concepts provided for them and they are molding it and shaping it to fit their needs in the classroom. The traditional classroom has changed so much. The only thing traditional about school anymore is 180 days, and going from 8-3 Monday through Friday, but what's happening in the classroom is not traditional…

Table 20 (continued)

Rocky Road School District	Brittany	We have a large population. We have a large network. We have teachers and administrators on board, but that doesn't happen overnight. I mean it's a process, and sometimes you have to fail to be successful. I mean it's just like life, when it doesn't work don't give up, but try something else. We pull together a meeting involving teachers, administrators, parents, the students… try to figure out what's going on; what the student needs; how do we address those needs; what things we need to put in place. If out of that meeting, if it's determined that some sort of online or blended learning scenario needs to happen, we identify what that is... all requests go through the superintendent's office; go to the principal, the building principal… both of those folks have to agree; once that happens now those courses are advertised out to our teachers…
Rocky Road School District	Michelle	They come to me and we discuss it and then, if it is a possibility for them and their schedule, then they go to Mrs. Blank and she has a form that they also fill out. There is a paper that gets sent home to the parents and they must sign it. It's a contract and then also depending on what the course is, if it is a college course… there is a registration process...
Rocky Road School District	Mike	I don't do a complete flip classroom. But what I do is that I'll have a lab assignment that is found in the online notebook. It's all right there and I may have a video that they'd need to watch in order to answer some pre questions. They have to maybe watch a video that has instructions on how to set up pieces of equipment or use pieces of those equipment and so forth. Then when they come in they should have a certain amount of ground work laid out. It's flipped on certain days but on the average day I don't have…
Rocky Road School District	Philip	We had time sheets that we turned in that was signed off on by the principal that got us paid for that so you have to have that resource the ability of time to do it…
Rocky Road School District	Todd	I find myself now moving from somebody who is a lecturer to more of a facilitator for learning... They just kind of let the individual student log in and their doing their thing and I'm there to just basically facilitate the learning that they're doing and help them along the way. If it's an area I can help them in specifically, I will but if not I can get them the other personal help from other disciplines.
Mountain Top Community College	James	

Table 20 (continued)

Mountain Top Community College	Fred	
Mountain Top Community College	Holly	The best thing I did was put the faculty union president on my committee…. She was there to say yay or nay…. No, you can't do that or yes…that was a lot of it… so she got put on the committee… and she could answer it in the moment.
Mountain Top Community College	Carl	I like to travel to campuses to the high schools and meet with them face-to-face. I think it shows a commitment on the college's part if we are willing to make the trip. We have some high schools that are on the border with New York State and I have been up there to visit them. I think it shows commitment there. I mean, we could leverage technology to take care of those things. I just think that personal contact is really, really important. And the college has allowed me to do that.
Mountain Top Community College	Sarah	For example, the degree requires students take ENG110. Before they can register for the course, they have to take the placement test and score high enough. There is an English and Math Compass test. The testing can be done at any of our PHCC locations, however, some of our high school partners are equipped to give the test as well. Students generally have two attempts at the test and are provided with websites to help them prepare. There are developmental courses available for students that do not score high enough to register for a required course.
Rolling Meadows University	Sabina	
Columbia St. Ann College	Julie	
Columbia St. Ann College	Susan	We are heavily 'brick and mortar' with only summer where we offer the most of our limited online courses. There is only 2 during the academic year and most of our students are local. If they want an online alternative that comes from the high school itself with an articulation with other schools.

APPENDIX K

Table 21: Institutional Support: Evaluation

Category: Evaluation		
Institution	Interviewee	Quote
Rocky Road School District	Robert	We look at satisfaction…. If the parents and students are happy with what we are doing… How many of our students leave and go to somewhere else…. How many we get back from somewhere else… a lot of it swings with the attendance cycles because when they are in trouble here with attendance they go to somewhere else….and if they are in trouble there they come back… We also have a large population that are leaving that feel that aren't having their needs met special ed. So they go there and realize that it is better here… So they come back… We have a big transient sea population for this….
Rocky Road School District	John	
Rocky Road School District	Brittany	I think we look at students' success, and what students have been successful. What groups of students have been successful? I think that's how they have determined success in the program. Our graduation rate is very good. The students are doing well. Students who haven't historically done well are doing well. It's very interesting because we have taken students who have failed essentially repeatedly. We have put them online and many time they are not online one hundred percent; online has given them the experience of success, and that sort of transfers into the traditional classroom and things tend to be better for them so ultimately, the evaluation of the program comes back to the student's success in the program…
Rocky Road School District	Michelle	
Rocky Road School District	Mike	

Table 21 (continued)

Rocky Road School District	Philip	I have to make sure I adhere to their curriculum. They do check to see that we are doing… What we are supposed to be doing… I had to black out students' names and mail, I believe it was Dr. Blank at Blank College. I had to mail him an example of an A paper, a C paper, and a paper that was unsuccessful
Rocky Road School District	Todd	
Mountain Top Community College	James	We use assessment data, assessment processes to make sure the learning outcomes are being met and of course the faculty are being evaluated annually as part of the evaluation process to keep their jobs.
Mountain Top Community College	Fred	
Mountain Top Community College	Holly	You (instructors) are going to be observed on a rubric – scored on a rubric, not the instructor, the delivery of the content. They are going to review the text books. They are going to look at some student work, and if things aren't met, I put them on a program modification plan, and they literally could be decertified to teach the course. It must be equivalent to an on-campus course.
Mountain Top Community College	Carl	We don't do a formal evaluation. We are not assessing their teaching… What we are determining is if the course is equivalent to on campus course… They can show us how they are achieving the competencies and give us example of exams and work. They submit a common assessment for every class.
Mountain Top Community College	Sarah	
Rolling Meadows University	Sabina	Faculty that teach online are evaluated the same as if they were teaching in a traditional classroom as outlined in the CBA.
Columbia St. Ann College	Julie	
Columbia St. Ann College	Susan	Part of it is with the online committee to see how the classes have gone… ahh but as a formal committee to do just that, no… They go through the same course reviews that other classes do specifically designating the online part or the classroom part isn't part of that… just the overall class is working because of this… where it's not working because of this…

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